A STUDY TO EVALUATE THE EFFECTIVENESS OF DEEP BREAT EXERCISE ON HOT FLUSHES AMONG MENOPAUSAL WOM SELECTED COMMUNITY AT MADURAI

A DISSERTATION SUBMITTED TO

THE TAMILNADU DR. M. G. R. MEDICAL UNIVERSITY, CHEN

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF

MASTER OF SCIENCE IN NURSING

APRIL – 2012

A QUASI EXPERIMENTAL STUDY TO EVALUATE THE EFFECTIVENESS OF DEEP BREATHING EXERCISES ON HOT FLUSHES AMONG MENOPAUSAL WOMEN IN SELECTED COMMUNITY AT MADURAI.

K. ROSELIN VASANTHA KUMARI

A DISSERTATION SUBMITTED TO

THE TAMILNADU DR. M.G.R.MEDICAL UNIVERSITY, CHENNAI.

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF

MASTER OF SCIENCE IN NURSING

APRIL - 2012

CERTIFICATE

This is a bonafide work of K. ROSELIN VASANTHA KUMARI,

C.S.I. Jeyaraj Annapackiam College of Nursing, Madurai Tamilnadu, India submitted in partial fulfillment for the Degree of Master of Science in Nursing under the Tamilnadu Dr. M.G.R. Medical University, Chennai.

Signature of the principal _____

Prof. DR. (Mrs). C. JOTHI SOPHIA, M.SC (N)., RN.RM., Ph.D.,

College seal _____

A QUASI EXPERIMENTAL STUDY TO EVALUATE THE EFFECTIVENESS OF DEEP BREATHING EXERCISES ON HOT FLUSHES AMONG MENOPAUSAL WOMEN IN SELECTED COMMUNITY AT MADURAI - 2011

Approved by the dissertation committee on …….

RESEARCH GUIDE …….

Prof. Dr. (Mrs). C. JOTHI SOPHIA, M.Sc(N)., RN.RM., PhD.,

Principal,

C.S.I. Jeyaraj Annapackiam College of Nursing,

Madurai – 625004

CLINICAL GUIDE ……

Prof. (Mrs). SHANTHI, M.Sc(N)., RN.RM.,

H.O.D. of Obstetrics and Gynecology nursing Department,

C.S.I. Jeyaraj Annapackiam College of Nursing,

Madurai – 625004

MEDICAL GUIDE ……

Dr. (Mrs). MALARKODI, M.B.B.S., D.G.O., Dip.NB.,

Obstetrician,

Department of OBG, Christian Mission Hospital,

Madurai – 625001

A Dissertation submitted to

The Tamilnadu Dr. M.G.R Medical University, Chennai.

In Partial Fulfillment of the Requirements for the degree of

Master of Science in nursing

April – 2012

CERTIFIED THAT THIS IS A BONAFIDE WORK OF

K. ROSELIN VASANTHA KUMARI

C.S.I. JEYARAJ ANNAPACKIAM COLLEGE OF NURSING AND ALLIED SCIENCES, PASUMALAI, MADURAI.

SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF NURSING FROM THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY, CHENNAI.

EXAMINERS:

1. _____

2. _____

_____

Prof. Dr. (Mrs). C. JOTHI SOPHIA, M.Sc (N)., RN.RM., PhD.,

Principal

ACKNOWLEDGEMENT

Trust also in Him, And he shall bring it to pass.

Psalm 37:5

I express my deep sense of gratitude to thank **GOD** for his blessing and guidance,which enabled me to reach upto this step and to complete study.

I would like to express my heartfelt gratitude and sincere thanks to **Dr. Mrs. C. Jothi Sophia M.Sc(N)., Ph.D.,** Principaland professor of C.S.I. JeyarajAnnapackiyam College Of Nursingfor her endless guidance,thoughtful comments,invaluable suggestions,and constant encouragement throughout the period study.**Mrs. Merlin Jeyapal, M.Sc(N)., (Ph.D.,)** Professor, Vice Principaland research guide of CSI JeyarajAnnapackiam college of nursing for the facilities she had provided in the institution, her good counsel, encouragement and valuable suggestions.

I wish to extend my whole heart thanks to my clinical guide.**Mrs.Shanthi,M.Sc.,(N).,RN.RM.,**Professor,obstetrics and Gynecology,CSI JeyarajAnnapackiamCollege of Nursing, for her guidance,timely motivation and enthusiasting words which kept me working,towards the completion of this successful dissertation.

I am indeed grateful to **Dr.Malarkodi, M.B.B.S., D.G.O.,Dip.NB.,Obstetrician** for her guidance and encouragement to make this study successful one.

My sincere thanks to **Mr.V.Mani., M.Sc., M.Phil.,Biostatistician** for his help and extending necessary guidance and suggestion in statistical analysis.

My immense thanks to the **Librarian** atC.S.I JeyarajAnnapackiam College of Nursingand library staffs Dr.M.G.R.Medical University Chennai and college of nursing C.M.C Vellore, for their co-operation in procuring books when needed.

I thank all the participants of the study for their kind cooperation and participation without them the study is not possible.

Iextent my thanks to **Dr**. **Mr.SRS.Deva sahayamM.A.,M.Ed.,M.Phil.,D.L.,Ph.D.,** Headmaster, M.N.M.S.P.S NadarHigher. Sec.School, mallankinar for his valuable English editing.

I wish to record my special thanks to my husband **Mr. S.Anand,M.E.,**for his continuous support and encouragement.

I expressed my heartful gratitude to my beloved son **MasterA.Roshan**who missed my love and care during the course of this study.

I remember my beloved **Dad&Mom, Mr. S. KirubaiDoss, K. Pooranamary**and also to my beloved sister **Mrs.K.Jeyanthi,B.Sc(N)., RN.RM.,** for their continuous support,prayer and encouragement throughout this study.

I am indebted to my beloved friend **Mrs.V.Vijayalakshmi,M.Sc(N).,**lecturer,Vice principal, B.S.B College of Nursing Punjab. She stimulated me to choose this topic and gave her guidance and support through this study.

Last but not the least I extent my beloved thanks to my classmates**, "THE GLITTERING GLADIOLUS"** and all who have suggestion directly and indirectly to finish my study successfully.

My sincere thanks to one and all.

ABSTRACT

A quasi experimental study to evaluate the effectiveness of deep breathing exercises on hot flushes among menopausal women in selected community at Madurai district was undertaken by K.RoselinVasanthaKumari, as a partial fulfillment of the requirement of M.Sc (Nursing) under the Dr.M.G.R. Medical University in the year 2012.

Objectives of the study were

1. To assess the pretest level of hot flushes among menopausal women in both experimental groupand control group.
2. To assess the posttest level of hot flushes among menopausal women in both experimental group and control group.
3. To find the difference between pre and post level of hot flushes among menopausal women in both experimental group and control group.
4. To find the association between pretest level of hot flushes in experimental groupwith their selected demographic variables among menopausal women.

Research hypothesis was formulated as follows:

H_1There will be significant difference in the hot flushes among experimental and control group of menopausal women after implementation of deep breathing exercise.

H_2There will be significant association between pre test level of hot flushes and with demographic variables of experimental group.

The review of literature was done and organized based on review related to treatment of menopausal symptoms and effectiveness of deep breathing exercise on hot flushes women. The conceptual frame work of this study was based on Wiedenbach's clinical nursing art theory (1960). The research design used for the study was quasi experimental in nature. A purposive sampling technique was used to collect the data from the study participants. The tool was validated for content and the reliability score was found to be reliable(r= 0.9).The pilot study was conducted in pasumalai, with 6 menopausal women with hot flushes. The main study was conducted at kaithari nagar

in Madurai with 60 samples, 30 sampleswere in control and 30 in experimental group. The data was collected by using hot flush assessment 5 point likert scale. The collected data was analyzed, using descriptive and inferential statistics.Results revealed that hot flush during pretest, most of women 20(67%) were severe hot flushes in experimental group, 16(53%) were moderatesymptoms in control group. In the post test, half of the women 15(50%) had moderate hot flush in experimental group, majority of women 24(80%) had moderate in control group.The post test mean score 30.57(3.54) was lower than the pre test mean score 70.67(8.89), the‘t’ value 24.31which was highly significant at 0.001 level in the experimental group. The mean post test score of hot flush in the experimental group 30.57(3.54)was significantly lower than the mean post test scores of hot flush in the control group 62.13(4.46). The findings showed that the deep breathing exercise was effective in reducing hot flush symptoms. There was no significant association between levels of hot flush and selected demographic variables such age, marital status, education, occupation, monthly income of the family.It is inferred that that the menopausal women had reduced severity of hot flush symptoms. It is recommended to do the similar study among urban menopausal women. Implications were recommended in nursing education, nursing practice, nursing administration and nursing research.

INDEX

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDIX

APPENDIX - VII

IDENTIFICATION PROFILE

NAME	:	Mrs.K. Roselin vasantha kumari
COURSE : M.Sc(N) II Year		
COLLEGE	:	C.S.I JeyarajAnnapackiam College ofNursing
TOPIC	:	Deep breathing exercise
TIME	:	20 mts
GROUP	:	Study participants
VENUE	:	Community setup
A.V.AIDS	:	Flash cards

CENTRAL OBJECTIVES:

At the end of the teaching menopausal women will gain knowledge about hot flushes and be able to carry out breathing exercise to minimize hot flushes.

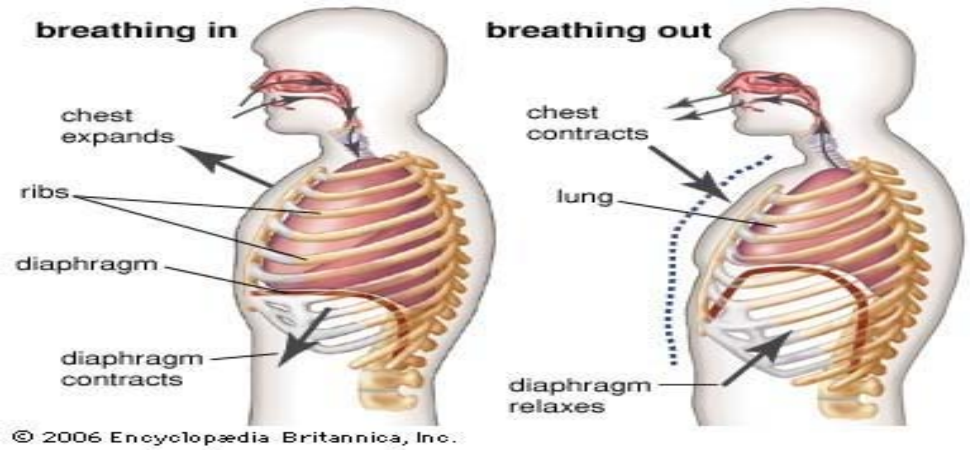
SPECIFIC OBJECTIVES:

At the end of teaching menopausal women will be able to:

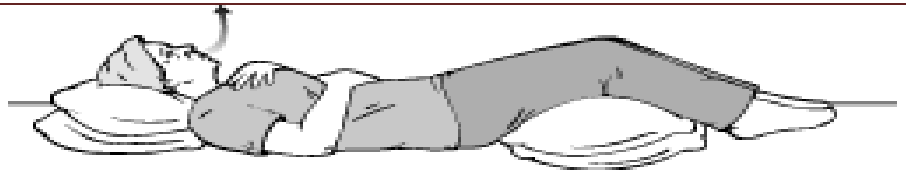
- Define the hot flushes
- Enumerate the factors of hot flushes
- List down the symptoms of hot flushes
- Differentiate normal breathing and deep breathing
- Demonstrate deep breathing exercise.
- State the management to relieve hot flushes

HOUR	SPECIFIC OBJECTIVES	CONTENT	TEACHING &LEARNING ACTIVITY	A.V. AIDS
2mts 2mts	The women's will be able to define the hot flushes The women's will be able to enumerate the factors of hot flushes	**INTRODUCTION:** One of the characteristics of menopause – Hot flashes occur due to the changes in hormone levels. Hot flashes are typically an experience of feeling heat in the body. There are many measures to relieve the hot flush discomfort. Today we are going to learn one such measure, that is deep breathing exercise. **WHAT IS HOT FLUSH?** The sensation which generally starts from chest or face and sometimes from back of the neck and then gets spread throughout the body is often accompanied by sweating and rapid heartbeats. This can last from **two to thirty minutes** each time it occurs. It also becomes a cause of night sweats, anxiety, and sleep problems. In this, the skin surface becomes hot to touch and gets reddening on face. This is the reason why it is called hot flash. The severity differs from person to person. **COMMEN TRIGGERS:** • Warm environments • Heat makers • Stress and anxiety • Hot and spicy foods and drinks • Over consumption of caffeine, alcohol, and sugar.	lecture cum discussion	flash cards

3mts 1mt	The women's will be able to list down the symptoms of hot flushes The women's will be able to describe the treatment	• Diet pills **SIGNS AND SYMPTOMS OF HOT FLUSHES:** ➢ **Sudden intense feelings of heat** in the face, neck, arms, torso, and sometimes the whole body. ➢ **Rapid or irregular heart beat and pulse**, including heart palpitations. ➢ **Flushing**, or reddened face and neck, particularly in lighter skinned women. ➢ **Perspiration** ranging from mild to profuse. ➢ **Cold chills** often follow hot flashes, though sometimes women only experience the chill. ➢ **Sleep disturbances** are characteristic of hot flashes that occur at night, also known as night sweats. **OTHER SYMPTOMS:** ➢ Nausea ➢ Dizziness ➢ Anxiety ➢ headaches **TREATMENT:** ✓ Hormone replacement therapy ✓ Deep breathing exercises ✓ Alternative and complementary therapies Before going to the deep breathing we can see normal breathing.	Listening	flash cards

2mts	Differentiate the normal breathing and deep breathing.	NORMAL BREATHING: ▪ Parts of respiratory system ▪ breathing-inspiration and expiration ▪ Chest movements ▪ Exchange of gas in the lungs on getting the air purified in the blood vessels and breathing out co_2.  **DEEP BREATHING EXERCISE**: Angela Chen Shui,(2006) Soul Alignment Spiritual Life Coach, Teacher of Divinity, Awakening Energy Healing Facilitator **INSTRUCTIONS:**	lecture cum discussion	flash cards

5mts	The women's will be able to demonstrate the deep breathing exercise.	Try to do deep breathing exercise twice daily. If you can, when you first feel a hot flash coming on, stop what you are doing, find a quiet place, and practice deep breathing exercise until you are feeling comfortable again. Time duration:10 minutes Procedure: 1. Lie down or sit in a quiet, comfortable position 2. Chest is moving in harmony with your abdomen.Now place one hand on your abdomen and one on your chest.  3. Breathe through your nose.  4. Inhale deeply and slowly through your nose into your abdomen. You should feel your abdomen rise with this inhalation. 5. Exhale through your mouth, keeping your mouth, tongue, and jaw relaxed.	lecture cum discussion	flash cards

5mts	The women's will be able to	 6. Relax as you focus on the sound and feeling of long, slow, deep breaths. 7. Ask the client to do it for 10minutes . 8. The client should do the deep breathing exercise daily, morning and evening for one month. **MANAGEMENT OF HOT FLUSHES:** • Dressing in light layers, • Avoiding spicy foods and heat, • Keep your bedroom cool at night. • Use fans during the day. • Wear light layers of clothes with natural fibers such as cotton. • Deep, slow abdominal breathing (six to eight breaths • per minute). Practice deep breathing for 15 minutes in the morning, 15 minutes in the evening and at the onset of hot flashes. • Exercise daily. Walking, swimming, dancing, and bicycling are all good choices • Eat a balance diet • Increase vitamin E intake to 800mg/day. **CONCLUSION:**	lecture cum discussion lecture cum	flash cards

		Till now we have discussed about hot flushes and the deep breathing exercise to reduce hot flushes. **FOLLOW-UP:** Practice deep breathing exercise for 15 minutes two times a day regular basis for at least one month.	discussion	lash cards

APPENDIX - VIII

fw;gpf;Fk; Kiw

Mrphpahpd; ngaH: jpUkjp.fp.Nuh];ypd; tre;jFkhhp

KJepiynrtpypah;fy;tp ,uz;lhk;Mz;L

fy;Yhpapd; ngaH:rp.v];.[n[auh[; md;dghf;fpak;nrtpypah; fy;Yhhp

jiyg;G : Mokhd *r;Rg;gapw;rp

khjtplha; epWj;jk;

mile;jngz;fspd;

vz;zpf;if : 30

Neuk; : 20 epkplq;fs;

ghlKiw :nra;Kiwtpsf;fg;glk;

xsp-xyprhjdq;fs; : tiuglk; ml;ilfs;

nghJthdFwpf;Nfhs;

Nghjidapd; Kbtpy; khjtplha; epWj;jk; mile;jngz;fs; cs;ntg;gk; gw;wpmwpTkw;Wk; Mo;e;j *r;Rg;gapw;rpnra;Jcs;ntg;gj;ijFiwj;Jf; nfhs;Sjy;.

Fwpg;gpl;lFwpf;Nfhs;:-

Nghjidapd; Kbtpy; khjtplha; epWj;jk; mile;jngz;fs;

- cs;ntg;gj;ijgw;wptiuaWf;fKbAk;
- cs;ntg;gj;jpw;fhdfhuzpfisnjhpe;Jnfhs;sKbAk;
- cs;ntg;gj;jpd; mwpFwpfistpthpj;Jciuf;fKbAk;
- ,ay;ghdRthrj;ijAk; Mo;e;jRthrj;ijAk; NtWgLj;jp $w KbAk;
- Mo;e;j *r;Rg;gapw;rpgw;wpnra;Kiwgapw;rpspf;fKbAk;.
- cs;ntg;gk; Fiwf;Fk; topKiwfs; gw;wptpthpj;Jciuf;fNtz;Lk;.

Neuk;	Nehf;fk;	nghUs; mlf;fk;	fw;gpf;Fk; jpwd; kw;Wk; Ghpe;Jnfhs;Sk; jpwd;	khjphp
2 epkp	khjtplha; mile;jngz;fshy;cs;ntg;gj;jpidtiuaWf;fKbAk; ngz;fshy; cs; ntg;gj;jpw;fhdfh	**Kd;Diu:** khjtplha; epWj;jj;jpw;FgpwF>cwhh;Nkhdpd; (<];l;Nuh[d;) khw;wj;jpdhy; ek; clypy; gykhw;wq;fs; Vw;gLfp;wJ.mjpy; xd;Wcs;ntg;gk;. ,J vjdhy; Vw;gLfpwJ+mjd; mwpFwpfs; vd;d>vd;gijAk; mijFiwf;Fk; topKiwfs; gw;wpAk; ehk; ,g;nghOJfhzg; NghfpNwhk;. **cs;ntg;gk; vd;why; vd;d?** cs;ntg;gk; vd;gJkhjtplha; epWj;jj;jpd; nghJthdmwpFwp> ,jdhy; #L Nghd;wczh;NthL $batpah;itAk;>mjpf ,jaJbg;gpidAk; czuKbAk;. cs; ntg;gk; Kjypy; Kfk;>khh;Gkw;Wk; fOj;jpd; gpd;Gwj;;jpy; Njhd;wpgpd;dh; Njhy; Nkwgug;gpy; Kf;fpakhfKfj;ijnjhLk; NghJR+IhfNjhd;Wk;. ,J 2 Kjy; 30 epkplk; ePbf;Fk;. NkYk; ,utpy; khjtplha; epWj;jj;jpw;FgpwF<];l;Nuh[d; cwhh;Nkhd; cw;gj;jpjpwd; FiwfpwJ. ,jdhy; clYf;Frhptpfpjcly; ntg;gj;ijguhkhpf;fKbahJ. ,jdhy; tUk; xUmwpFwpjhd; cs;ntg;gk;. **nghJthdfhuzpfs**;	fw;gpj;jy; kw;Wk; nra;Kiw	Tpsf;fg; glml;il

2 epkp 3 epkp	uzpfismwpe;Jnfhs;sKbAk; ngz;fshy; cs; ntg;gj;jpd; mwpFwpfistpthpj;Jciuf;fKbAk;	1. kpjntg;gfhyepiy 2. kdmOj;jk; kw;Wk; ftiy 3. R+lhdkw;Wk; fhukhdczTg;nghUl;fs; kw;Wk; ghdq;fs; 4. mjpfkhdfhgp> kJ kw;Wk; mjpfkhfrh;f;fiucl;nfhs;Sjy; 5. mjpfg;gbahdrj;Jkhj;jpiufs;vLj;jy; **cs;ntg;gj;jpw;fhdmwpFwpfs;** ▪ jpBnudKfk;>fOj;J>iffs;> if vYk;Gkw;Wk; rpyNeuk; cly; KOtJk; ntg;gkhfczh;jy;. ▪ Ntfkhfmy;yJrPuw;w ,UjaJbg;Gkw;Wk; ehbJbg;G>glglg;G. ▪ rptg;ghdkpUJj;Njhy; cs;sngz;fSf;Fmjpf ,uj;jXl;lk; Kfj;jpYk; fOj;jpYk; Njhd;Wjy; ▪ tpah;j;Jnfhl;Ljy; ▪ cs;ntg;gj;ijnjhlh;e;J>cly; FspHe;JtpLjy; ▪ cs; ntg;gj;jpdhy; Jhf;fkpd;ik **NtWmwpFwpfs;** • Fkl;Ljy;	fw;gpj;jy; kw;Wk; nra;Kiw	Tpsf;fg; glml;il

1 epkp 2 epkp	ngz;fshs; cs; ntg;gj;jpw;fhdrp fpr;irKiwfistpthp f;fKbAk; ngz;fshy; Mo;e;JKr;Rgapw; rpapidnra;aKbAk ;	• jiyRw;wy; • ftiy • jiytyp **rpfpr;ir** ➢ cwhh;Nkhd; khw;Wrpfpr;ir ➢ Mo;e;j *r;Rgapw;rp Mo;e;j *r;Rgapw;rpidgbg;gjw;FKd;G ,ay;ghdRthrj;ijgw;wpghh;g;Nghk.; **,ay;ghdRthrk**; ➢ Rthrk; ,uz;Ltifg;gLk; ➢ ;cl;Rthrk; kw;Wk; ntspRthrk; ➢ Rthrj;ijcs;,Of;Fk; NghJEiuaPuypy; nrd;WRj;jpfhpf;fg;gl;L ,uj;jf;FohapYs;sfhh;gd;-iI-Mf;iriInspNaw;WfpwJ. **Mo;e;jRthrclw;gapw;rp mwpTiwfs**; jpdKk; ,UKiwMo;e;jRthrgapw;rpvLf;fNtz;Lk; ,e;jgapw;rpnra;Ak; NghJcs;ntg;gk; Vw;gl;lhy; cldbahfepWj;jNtz;Lk;. gpwFmikjpahd ,Ij;jpy; mkh;e;JkWgbAk; ,e;jgapw;rpiaePq;fs; ey;yepiyf;FtUk; tiunra;aNtz;Lk;.	fw;gpj;jy; kw;Wk; nra;Kiw	Tpsf;fg; glml;il

5 epkp	ngz;fshy; cs; ntg;gj;ijjtph;f;Fk; Kiwgw;wptpthpj; J $w KbAk;	**nra;Kiw:** 1. mikjpahd ,lj;jpy; cq;fSf;FtrjpahdKiwapy; cl;fhh;e;Jmy;yJgLj;Jnfhs;sNtz;Lk;.cq;fs; cliyrkd; epiyapy; itf;fNtz;Lk. 2. *f;FtopahfRthrpf;fNtz;Lk; 3. mr;rkaj;jpy; khh;Gk;>tapWk; xNukhjphpahfNknyOkGtijfhzKbAk;. 4. ,g;NghJxUifiacq;fs; tapw;wpd;NkYk;>xUifiakhh;gpd; NkYk; itf;fNtz;Lk;. 5. *f;fpypUe;JtapWtiu *r;irnkJthfTk;>MokhfTk; ,Of;fNtz;Lk;. mg;gb ,Of;Fk; NghJek;Kilatapw;Wg; gFjpNknyOk;Gtijg; ghh;f;fyhk;. 6. ,Oj;j*r;irtha;g;gFjpapd; topahfntsptplNtz;Lk;. *r;RntsptUk; NghJtha;>ehf;Fkw;Wk; ehbg;gFjpia ,NyrhftplNtz;Lk;. 7. njhlh;e;JxUkhjj;jpw;Ffhiykw;Wk; khiyNeuq;fspy; Mo;e;j *r;Rg; gapw;rpnra;aNtz;Lk;. 8. ,g;gapw;rpiajpdKk; 10epkplk; nra;aNtz;Lk;. **cs; ntg;gj;jpidjtph;f;Fk; Kiwfs;** • NyrhdJzpfisg; gad;gLj;jpcLj;jNtz;Lk • R+lhdkw;Wk; fhukhdtifczTg;nghUs;fisj; jtph;f;fNtz;Lk;. • Fspuhd ,lq;fspy; jq;fNtz;Lk; Jhq;Fk; miwia ,uTNeuq;fspy;	fw;gpj;jy; kw;Wk; nra;Kiw	Tpsf;fg; glml;il Tpsf;fg;

5 epkp		Fspuhfitj;Jf;nfhs;sNtz;Lk; • gfy; Neuq;fspy; fhw;whbiagad;gLj;jNtz;Lk;. • gUj;jp ,iyapy; nra;ag;gl;lnkypjhdMilfismzpaNtz;Lk;. • xUepkplj;jpy; 6 Kjy; 8 Kiwtapw;W *r;Rg;gapw;rpiankJthfTk; NtfkhfTk; nra;aNtz;Lk;. fhiykw;Wk; khiyNeuq;fspy;(Mo;Rthrclw;gapw;rp *r;R ,Oj;JtpLk; gapw;rpia) njhlh;e;J 10epkplk; nra;JgofNtz;Lk;. • elj;jy;>ePe;Jjy; eldg;gapw;rpkw;Wk; kpjptz;bXl;Ljy; Nghd;wclw;gapw;rpfisjpdKk; Nkw;nfhs;Sjy; ey;yJ. • rhptpfpjczitcz;zNtz;Lk; • xUehisf;F 800 kp.ypfpuhk; (itl;lkpd;) • tpl;lkpd; <rj;JczitmjpfkhdvLf;fNtz;Lk; **KbTiu:** ,t;tsTNeuk; cs;ntg;gj;ijg; gw;wpAk; mijFiwf;fcjTk; Mo;Rthrclw;gapw;rpiagw;wpAk; ghh;j;Njhk;. **gpd;gw;wNtz;bait**: xUehisf;F ,U KiwMo;Rthrclw;gapw;rpianjhlh;e;J 15 epkplj;jpw;Fnra;JgofNtz;Lk;.	fw;gpj;jy; kw;Wk; nra;Kiw	glml;il

		,ijnjhlh;e;JxUkhjj;jpw;Fnra;aNtz;Lk;.		

APPENDIX - IX

Ñ┌ Ć ╟╞±üÈ≤ ù‰©‡≤ §…

Èč┤╢ óÔ≤

§… ûõØ¡°§¥
¡Î†¡.ôČ∞¡, M.Sc(N)
ć⌟ ¢ČΩ∆č⌟
Ω.ÜŦ.à. ĆĐ°¢Čğ Ä∫® üČ©ª°≤
Ć¬ »«°¥ óµˇ∆,
ü‖†č‖⊩

§•™‡ü§¥
¡Î†¡. ć ⊨ČŦ«∫ §ô∞ù‡†Č∆,
M.Sc(N) Ç¢ÆõČ≤ ÅÆ‰ †Čú»,
Ω.ÜŦ.à. ĆĐ°¢Čğ Ä∫® üČ©ª°≤
Ć¬ »«°¥ óµˇ∆,
ü‖†č‖⊩

È∫Úč ⊨

È∫Úč╞

†Čù»õČ≥ ¬ÒØùØ¡□‡ √ß‡ ðČ¥ć╩ČÕ∫ †ČÒù«®Čµ ÑΓĆ╟±üØ¡č╤ Ñú¥ª∫ß®¥.ÑΓĆ╟±ü≤ Ć╛ ČÊ§ČóÑõµÈÓ§Ê≤ ╒õČóÑú¥ùµ.ÑΓĆ╟±ü ûŁ©ć╥≠øč╤ ‡č╣©ó Å∑∞ù ¸´╟ ü≈□Ω≈č╤ ü□Ãüø©óć╛ Čªć┤Č≤.ÑΓĆ╟±ü≤ †Čù»õČ≥ ¬ÒØùØ¡∫ Ć╛ ČÊ§Č® ÄÃ‡Ã. Çù®Čµ ╒Ñõć╛ Č∫ßÑú¥ć╟Č‰ Ûø° »°¥č╟Í≤, Ä¡óÇù° Êø±√č╤Í≤ Ñú¢ ÈøÍ≤.ÑΓ Ć╟±ü≤ Èù«µ Èó≤, †Č¥Ë †□Ò≤ óÓØ¡® √∫ËßØ¡µ ć╚Č∫Ã √∫®¥ ć╚Čµ ü¢±ü¶»µ È©ª°†ČóÈóØ¡µ Ć╚Č‰§ù□‡ ╒õČóć╚Č∫Ò≤.ÇÊ è Èùµ êç ¬ƒõ≤ ’ø©‡≤.ć╩Ï≤ Ç¢»µ »°¥č╟Í≤ ü°≤ †□Ò≤ ˇ©óØ¡µ √¢´ôč╤ ÑÆõČªßÊ.†Čù»õČ≥ ¬ÒØùØ¡□‡ √ß‡ ÉŦ≠Ć╞ČÐ∫ ðČ¥ć╩Č∫ Ñ□üØ¡ ¡ß∫ ‡č╣§ùČµ.ÑõÏ©‡ ôΔ»ªù Ñõµ Ć╟±üØč╚ ü¢Č†Δ©óÈø°ČÊ.Çù®Čµ §Î≤ ÄÃ‡Ã ùČ∫ ÑΓĆ╟±ü≤.

Ć╛ ČÊ§Č® óČ¢¿óΓ

†® ÄÓØù≤ †□Ò≤ ó§č╟ ╒õČ® †□Ò≤ óČ¢†Č® Ñúì± Ć╛ ČÎ≠óΓ

Ä¡ó†Č® óČ√, “

Ëč╓±ü•©ó≤ †□Ò≤ †Ê±ü•©ó≤

Ñú§óØ¡µ ć╟č╟ Ć¬ ≥ùµ

ùč╟Èøč╝ Ñ£¥ØÊ≤ óÎ»č╝ ü°∫ü‰ØÊùµ

Ć╡ ČÊ§Č® óČ¢¿ó╒

é. ƒù Ć╟╞±ü óČ£¬č╟

è. †® ÄÓØù≤ †□Ò≤ ó§č╟

ê. ╒õČ® †□Ò≤ óČ¢†Č® ÑúÌ±Ć╡ ČÎ≠ó╒ †□Ò≤ üČ®™ó╒

ë. Ä¡ó†Č® óČ√ †□Ò≤ ô¥©óč╞

í. Ëč╓±ü•©ó≤ †□Ò≤ †Êü•©ó≤

ì. Ñú§óØ¡µ ć╟╞č╟ Ć╕ ≥ùµ

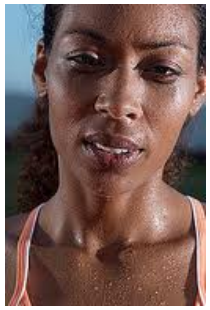
ÄÃ‡Ãó⎾

Èó≤, óÓØÊ Ć╠±ü†ČóÑú¥ùµ

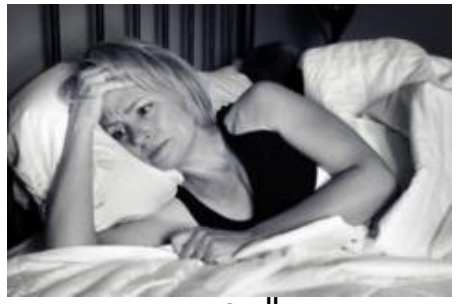
‡†≠õµ

ùč╠§«

Ä¡ó »°¥č╠



˘©ó ƒ∫č╨



ó§č╠

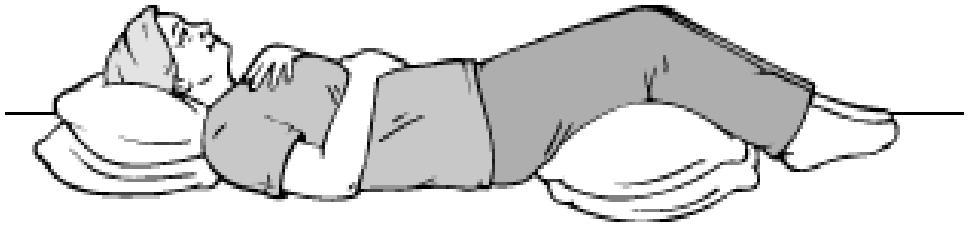
Ñ∏Ć╟±üØ¡□óČ® ÄÃ‡Ãó∏

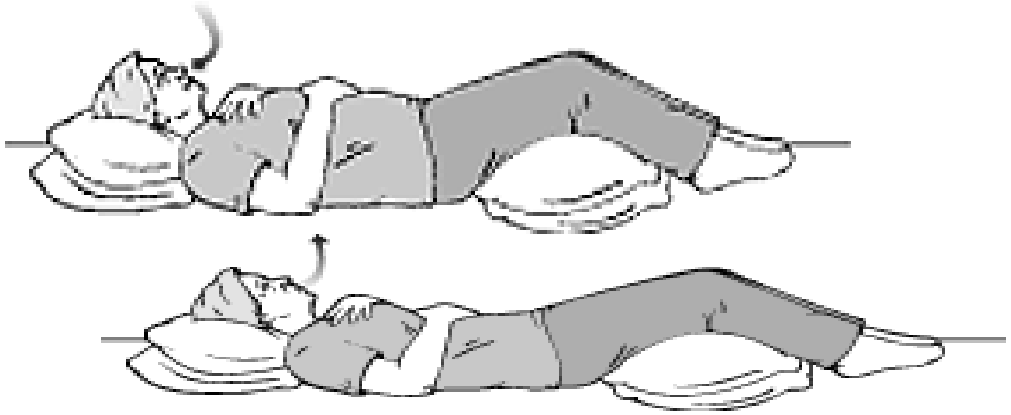
- ¡“Ć╞® Èó≤, óÓØÊ, č╔ó∏, č╔ ÜÏ≤Ë Ω£ć╚¢≤ Ñõµ ÈÓ§Ê≤ Ć╟±ü†ČóÑú¥ùµ
- ć╟ó†Čó Äµ£Ê –¢□ß ÇÎù° Êø±Ë †□Ò≤ ûČøÊø±Ë, üõüõ±Ë.
- Ω§±üČ® ƒÎÊØć╚Čµ Ñ∏¶ Ć╡ ÆóÔ©‡ Ä¡óÇ¢Øùä≠õ≤ ÈóØ¡Ï≤, óÓØ¡Ï≤ Ć╚∆ùµ.
- »°¥ØÊ Ć╔Č≠‰ùµ
- Ñ∏Ć╟±üØč╚ Ć╚Čõ¥∞Ê, Ñõµ ‡À∞Ê»‰ùµ
- Ñ∏ Ć╟±üØ¡®Čµ ˇ©óƒ∫č╝

ć╟ÒÄÃ‡Ãó∏

- ‡†≠‰ùµ
- ó§č╟
- ùč╟§«

Å∑∞ù ╟§ČôÑõ□ü≈□Ω





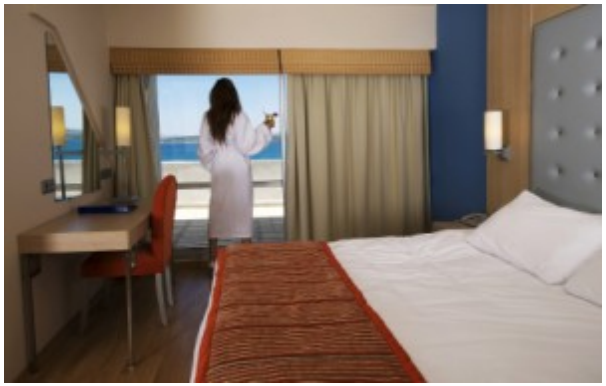
Ć¬ ≥Èč╣:

1. Äč╩ ¡°Č® ÇõØ¡µ Ñ™óÔ©‡ §ô¡°Č® Èč╣≈µ Ñ≠óČ¥∞Ê Äµ£Ê ü‰ØÊ©Ć╔ČΓ¶ ć╠Æ‰≤.
2. ¸©‡ §…°Čó ╢§ČΩ©ó ć╠Æ‰≤.
3. Ä´ô†°Ø¡µ †Č¥Ë≤, §≈Ò≤ âć╞ †Č¡∆°Čóć╩ Ć╠Ó≤Ë§č╚ óČúÈøÍ≤.
4. Ç±ć╛ ČÊâÎč╔č╩ Ñ™óΓ §≈□Ã∫ ć╩ï≤, âÎč╔č╩ †Č¥√∫ ć╩ï≤ č╠©ó ć╠Æ‰≤.
5. ¸©ª«Î∞Ê §≈Ò§č╞ ¸´č¬ Ć╩Ê§ČóÌ≤, Å•†ČóÌ≤ ÇÓ©óć╠Æ‰≤. Ä±üø ÇÓ©‡≤ ć╛ ČÊû≤Èč╕° §≈□Ò± ü‡¡ ć╩Ć╠Ó≤Ë§č╚± üČ¥©ó£Č≤.

6. ÇÓØù ¸´č¬ §Č≥±ü‡¡≈∫ §…°ČóĆ╠À≈õć╠Æ‰≤. ¸´╢ Ć╠À§Î≤ ć╛ ČÊ §Č≥, ûČ©‡ †□Ò≤ ûČø±ü‡¡č╝ Çć╠ôČó »õ ć╠Æ‰≤.
7. Ć╙Čõ¥∞Ê âÎ †ČùØ¡□‡ óČč╠ †□Ò≤ †Čč╠ ć╙¢™óÀµ Å∑∞ù ¸´╢± ü≈□Ω Ć¬≥ªßČ¥ó¶Č ÜʃÒ ó§Õ©óć╠Æ‰≤.

ù‰±Ë Èč╣ó┌

óČ□ć╣Č≠õÈ┌¶ Äč╣ üÎØ¡ Åč¬óč╣ Ä¿ùµ



Å∑∞ù ╢§ČôÑõ□ü≈□Ω ûõØùµ

- ˘™‡≤ Äč╣č╝ Ç¢Ì ć╚¢™óÀµ ‡À¢Čóč╠ØÊ© Ć╓Č╒¶ ć╠Æ‰≤.
- üÎØ¡ Çč╠≈µ Ć╕ ≥°±ü≠õ Ć╝«ùČ® Åč╕ óč╣ Ä¿° ć╠Æ‰≤.
- âÎ ¬ƒõØ¡µ ì Èùµ ï Èč╣ §≈□Ò ¸´╠±ü≈□Ωč╝ Ć╝Ê§ČóÌ≤ Å•†ČóÌ≤ Ćô≥° ć╠Æ‰≤. óČč╠ †□Ò≤ †Čč╠ ć╚¢™óÀµ (Å∑╠§ČôÑõ□ü≈□Ω ¸´╠ ÇÓØÊ »‰≤ ü≈□Ωč╝) Ć╚Čõ¥∞Ê éí ¬ƒõ≤ Ć╕ ≥Ê ü•óć╠Æ‰≤.

ð ûõØùµ †□Ò≤ ƒ¡§Æø ä≠‰ùµ ć╛ČſßÑõ□ü≈□Ωóč╢ ¡®È≤ ć╜ □Ć╓ČΠÔùµ ûµ£Ê.

ôΔ»ªù ÑúÌ

ùÆ”¥ ‡øØùµ

č╟≠õƒ∫ E

óČ□ßČøč╝ ü°∫ü‰ØÊùµ

‡À¥∞ù ùÆ”∆µ ‡ÀØùµ

Ñõ□ü≈□Ω

- ¡®È≤ ô∆»ªù Ñúč╠ ÑÆúć╠Æ‰≤.
- ¡®È≤ ï õ≤¶¥ ùÆ”¥ ÄÎ∞ùć╠Æ‰≤.
- âÎûČč╢©‡ ïçç ƒ.«. ª¢Č≤ (č╠≠õƒ∫) »≠õƒ∫ E ôØč╚ Ä¡ó†Č® Ü‰©ó ć╠Æ‰≤.
- üóµ ć╚¢™óÀµ óČ□ßČøč╝ ü°∫ü‰Øùć╠Æ‰≤.
- ‡À¥∞ù ùÆ”∆µ ‡ÀØùµ
- Ñõ□ü≈□Ωč╝ ć╩ □Ć╓Č∏Ôùµ

ÈøìČ ╞

Ç∂§¶Ì ć╚¢≤ Ñ┌ Ć╟±ü≤ ü□ÃÍ≤ Äč╚ ‡č┤╢©ó Ñù Ì≤ Å∑∞ù ╢§ČôÑõ□ü≈□Ωč╝ ü□ÃÍ≤ üČ¥Øć╚Č≤.âÎûČč┤╢©‡ ÇÎ Èč┤ Å∑╢§ČôÑõ□ü≈□Ωč╝ Ć╚Čõ¥∞Ê éí ¬ƒõØ¡□‡ Ć╕≥Ê ü•óć╟Æ‰≤. Çč╚ Ć╚Čõ¥∞Ê âÎ †ČùØ¡□‡ Ć╕≥° ć╟Æ‰≤.

Ωª´č¬ Èč╣ó╒

- ð Č¥ć╨ Čʃ †Č□Ò Ωª´č¬
- †Č□Ò †□Ò≤ Êč ╘ Ωª´č¬ Èč╣ó╒
- Å∑∞ù ¸´╟ ü≈□Ω
- Å∑∞ù ╟§ČôÑõ□ü≈□Ω

CHAPTER - I

INTRODUCTION

“They're not Hot Flushes”....they are Power Surges!!
The word "menopause" literally means the "end of monthly cycles" from the Greek word *pausis* (cessation) and the root *men-* (month), because the word "menopause" was created to describe this change in human females, where the end of fertility is traditionally indicated by the permanent stopping of monthly menstruation or menses.

The Indian Menopause Society’s (2008), Tammy Elizabeth southin gave Consensus Statement contains important statistics about menopausal symptoms and recommendations to improve healthcare for Indian women.

According to IMS research, there are currently 65 million Indian women over the age of 45. Not only has that, according to IMS, menopause often struck Indian women as young as 30-35 years. Despite these figures, IMS founders discovered at its inception that - like most Indian women (including the urban elite) - doctors and health professionals themselves were quite clueless about menopause-related issues. The average age of menopause in India is 47.5 years.

Indian women living in rural areas (72% of the population) and urban areas both cite having urogenital symptoms and general body aches and pains. Interestingly, women in urban areas complain more about having hot flushes, mood swings, psychological problems, and intercourse challenges. Like their Western counterparts, urban-based Indian women are subjected to more demanding and fast-paced lifestyles which may explain the differences in symptom reporting.

Eighty-five percent of the women in the United States experience hot flushes of some kind as they approach menopause and for the first year or two after their periods stop. Between 20 and 50% of women continue to have them for many more years. As time goes on, the intensity decreases.

Van Keep in (1970) conducted a survey for an International Health Foundation of attitudes to the menopause in several European countries included the statement the menopause marks the beginning of old age'.

Mohile (2003) stated that the number of women in the post-menopausal age of 50-59 years is projected to increase from 36 million to 2000 to 63 million in 2020.

Sue Davis(2005) says that symptoms of hot flushes, hotness in the face, or some women have total body heat,and start sweating; some women wake up several times a night drenched in sweat.Hot flushes is a vasomotor symptoms and vary immensely in both their severity and duration, for many women, they occur occasionally and do not cause much distress, but for about 20% they can be severe and can cause significant interference with work, sleep and quality of life.

Bansal and Thaker (2005) determined age and perception of menopause as well as prevalence of various menopausal symptoms amongst underprivileged women of Ahmadabad.Suggested that the drop in estrogen levels that occurs around the menopause affects the part of the brain involved in body temperature control. Another theory is that changes in other brain chemicals, including serotonin, are implicated.

Whatever the cause, the effects can include a rise in skin temperature in the cheeks, forehead, upper arms, chest, abdomen, back, calves, thighs and fingers, with increased blood flow in the hands, calves, and forearms. The increase in heat causes blood vessels just under the skin surface to dilate - get bigger - resulting in the classic florid cheek look associated with hot flushes.

For the 70 to 75 per cent of women who have menopausal hot flushes, some of whom experience several attacks a week for four or more years, there is a bewildering range of over-the-counter and prescription treatments available. Many have been found to be effective, but large numbers have not, and in some cases the placebo or dummy treatment has been shown to be as effective as the therapy on trial.

Other approaches to treatment of menopausal symptoms (primarily hot flashes) include exercise, which improved quality of life but not menopausal symptoms, and a breathing technique that shows early promise in reducing hot flashes.

Thomas Jefferson, US Government's National Institute of Aging, published that the life style changes of hot flush women "Lifestyle changes should be implemented by all women with menopause-associated hot flushes, Interventions that help regulate core body temperature include wearing lightweight cotton clothing, dressing in layers, using fans or air conditioning, consuming cool or cold foods and drinks, and avoiding hot foods and drinks".

Deep breathing, or relaxation breathing involve breathing in deeply and exhaling at an even pace.Women should slowly breath in through your nose. With a hand on your stomach right below your ribs, you should first feel your stomach push your hand out, and then your chest should fill. Slowly exhale through your mouth, first letting your lungs empty and then feeling your stomach sink back. Taking 6 to 8 deep breaths per minute for 10 minutes, twice a day can reduce hot flushes by 40%.This technique can be helpful at the onset of a hot flush to shorten its duration or intensity.

In new research at Indiana University, doctors are recruiting around 200 women for the biggest trial yet of slow deep breathing. It follows a number of small studies which have shown that it can be highly effective. Results from a study at Wayne State University in America, show that paced respiration - slow, deep, abdominal breathing - reduced hot flush frequency by around 50 per cent. Other exercises could work too. A study by the American College of Sports Medicine showed that strength training helped to reduce hot flushes by up to 50 per cent.

SIGNIFICANCE AND NEED FOR STUDY

Jaszmann, Van Lith and Zaat (1969) carried out in Netherlands, of women at various stages of menopausal transition, as well as a normally menstruating group, defined as having Hot flushes rose to a maximum of 65% one to two years after cessation of menses and decline thereafter.

Thompson, Hart and Durno (1973) reported by the incidence of hot flushes. 74% of post-menopausal women in Scotland reported hot flushes. Of these 17% had been having them for over one year, 50% for two to five years and 19% for more than five years.

McKinlay and Jefferys (1974) identified that, Hot flushes ranged from about 18% among normally menstruating women through a maximum of 75% during the climacteric to about 29% among women who were at least nine years post-menopausal.

Erlik, Meldrum and Judd in (1982) suggested that the know effects of body weight on estrogen levels in post-menopausal women may be important factor in hot flushes.

Sen (2005) conducted a study in Kolkatta, Hot flush was complained by only one fourth of the menopausal women studied.

Dr. Herbert Benson, (2008) noted that relaxation-based techniques help cool hot flashes in 90 % of women without any hormonal therapy at all.

Rees and Purdie, (2006) estimated that about 70 per cent of westernized women experience vasomotor symptoms. Vasomotor symptoms are commonly at their worst two or three years before menstruation ceases, but they may continue for many years afterwards.

Dr. Benson established that these techniques on reducing stress and controlling the fight-or-flight response. Direct effects included deep relaxation, slowed heartbeat and breathing, reduced oxygen consumption and increased skin resistance.

Angela Chen Shui(2010) says that best to practice 10-step deep breathing exercise and it will pay off in high dividends the next time you feel stressed out and overwhelmed.

Roger Dobson,writes slow deep breathing may be one of the most effective 'natural' treatments for menopausal hot flushes, **abdominal** breathing exercises can halve the number of attacks, according to researchers investigating treatments for a condition that affects seven out of 10 women during and after the menopause.

Deep breathing practices, meditation and yoga had shown to calm the mind, relax the body and strengthen the immune system (Rachael light bird).

Rogarcole, taking a more traditional Iyengar perspective, outlines a rigorous relaxation sequence that aims at changing the physiological response of the stress response. He advocates in order, to promote deepest relaxation, one must minimize stimulation of the brain's reticular activating system(RAS), posterior hypothalamus and sympathetic nerve centers in the brainstem, and maximize stimulation of the brain centers that actively inhibit the RAS and promote parasympathetic activity.

The philosophy and practice of yoga offer many insights about the way that the mind and body work. In 1982, the National Institute of Health established the office of Alternative medicine (OAM). In 1998, this became the National center for Complementary and Alternative Medicine (NCCAM). The center is funding research about yoga and its role in promoting wellness. Preliminary findings suggest that yoga helps to prevent, heal, or alleviate conditions such as heart disease, symptoms of menopause, carpel tunnel syndrome, asthma, diabetes, high blood pressure and many chronic disabilities (Lipson 1999).

The medical profession has gradually come to realize deep breathing potential for hot flush relief. "Over the years, deep breathing has become one of our primary therapies for hot flush and stress management", says C. Noel BaireyMerz, M.D,.a cardiologist in Los Angeles.

With these above mentioned significance the investigator was motivated to evaluate the effectiveness of deep breathing exercise on hot flushes among menopausal women.

STATEMENT OF THE PROBLEM

A quasi experimental study to evaluate the effectiveness of deep breathing exercises on hot flushes among menopausal women in selected community at kaitharinagar.

OBJECTIVES:

1. To assess the pretest level of hot flushes among menopausal women in both experimental group and control group.
2. To assess the posttest level of hot flushes among menopausal women in both experimental group and control group.

3. To find the difference between pre and post level of hot flushes among menopausal women in both experimental group and control group.
4. To find the association between pretest level of hot flushes in experimental groupwith selected demographic variables among menopausal women.

RESEARCH HYPOTHESES:

H1: There will be significant difference in the hot flushes among experimental and control group of menopausal women after implementation of deep breathing exercise.

H2: There will be significant association between pre test level of hot flushes and with demographic variables of experimental group.

OPERATIONAL DEFINITION

EFFECTIVE

In this study it refers to a result or action in terms of significant reduction in the level of hot flushes as measured by the hot flush assessment 5 point likert's scale.

MENOPAUSE

In this study it refers to ovarian failure due to loss of ovarian follicular function accompanied by estrogen deficiency resulting in permanent cessation of menstruation and loss of reproductive function.

DEEP BREATHING

In this study it refers to an act of inhaling and exhaling air refers to a slow, rhythmic, repetitive breathing pattern used to reduce the level of hot flushes of menopausal women.

HOT FLUSH

In this study it refers to momentary sensation of heat that may be accompanied by a red, flushed face and sweating. The cause of hot flashes is not known, but may be related to changes in circulation.

ASSUMPTIONS

1. Women with menopause may have hot flushes and night sweats.
2. Deep breathing exercise may reduce hot flushes and night sweatsof women with menopause.

DELIMITATION

1. Accepting the verbal response alone.
2. Getting information only from the subjects
3. The data collection period was limited to 5 weeks.

PROJECTED OUTCOME

This study will help the nurses to understand the level of hot flush and sweats among women with menopause. This will enlighten the effectiveness of deep breathing exercisein reducing the hot flushes and sweats of menopausal women. And also it helps to provide mental and physical peace and relaxation. It helps to reduce the cost and duration of treatment. Long term practice of deep breathing exercise helps to reduce hormonal changes which decrease the hot flushes and sweats.

CHAPTER-II

REVIEW OF LITERATURE

A literature for review is a carefully designed, logically developed discussion that provides the rationale for the problem statement, significance of the problem, theoretical perspective, research design and methodology reviewing the literature provides a better understanding and insight which is necessary to develop a broad conceptual framework in which the problem can be examined the researcher attempts to find out how the proposed study fits into a large universe of the related knowledge. Keeping this aspect in the mind the researcher probed into the available resources.
This chapter includes review of literature for this study which is organized under the following headings.

1. Studies related to treatment of menopausal symptoms
2. Studies related to hot flushes and night sweats among menopausal women.
3. Studies related to effects of deep breathing exercise on hot flushes among menopausal women.

1. Studies related to treatment of menopausal symptoms

Shou C, Li J, Liu Z.(2010)conducted study on Complementary and alternative medicine in the treatment of menopausal symptoms**.** A large number of women will pass through menopause each year. Women in menopausal transition experience a variety of menopausal symptoms. Although hormonal therapy remains the most effective treatment, side effects have been reported by several large studies. An increased number of women seek the use of complementary and alternative medicine (CAM) for treating menopausal symptoms. This review analyzes the evidence from systematic reviews, randomized controlled trials and epidemiological studies of using herbal medicine (Blackcohosh, Dong quai, St John's wart, Hops, Wild yam, Ginseng, and evening primrose oil) and acupuncture for the treatment of menopausal symptoms. Evidence supporting the efficacy and safety of most CAM for relief of menopausal symptoms are limited. Future larger and better controlled studies testing the effectiveness of these treatments are needed.

Innes KE, SelfeTK, Vishnu A.(2010) reported that Twenty-one papers representing 18 clinical trials from 6 countries, including 12 randomized controlled trials (N=719), 1 non-randomized controlled trial (N=58), and 5 uncontrolled trials (N=105). Interventions included yoga and/or meditation-based programs, tai chi, and other relaxation practices,including muscle relaxation and breath based techniques, relaxation response training, and low-frequency sound-wave therapy. Eight of the nine studies of yoga, tai chi, and meditation-based programs reported improvement in overall menopausal and vasomotor symptoms; six of seven trials indicated improvement in mood and sleep with yoga-based programs, and four studies reported reduced musculoskeletal pain. Results from the remaining nine trials suggest that breath-based and other relaxation therapies also show promise for alleviating vasomotor and other menopausal symptoms, although intergroup findings were mixed. Most studies reviewed suffered methodological or other limitations, complicating interpretation of findings.

Shifren JL, Schiff I.(2010) reported that role of hormone therapy in the management of menopause. There are many options available to address the quality of life and health concerns of menopausal women. The principal indication for hormone therapy (HT) is the treatment of vasomotor symptoms, and benefits generally outweigh risks for healthy women with bothersome symptoms who elect HT at the time of menopause. Although HT increases the risk of coronary heart disease, recent analyses confirm that this increased risk occurs principally in older women and those a number of years beyond menopause. These findings do not support a role for HT in the prevention of heart disease but provide reassurance regarding the safety of use for hot flushes and night sweats in otherwise healthy women at the menopausal transition. An increased risk of breast cancer with extended use is another reason short-term treatment is advised. Hormone therapy prevents and treats osteoporosis but is rarely used solely for this indication. If only vaginal symptoms are present, low-dose local estrogen therapy is preferred. Contraindications to HT use include breast or endometrial cancer, cardiovascular disease, thromboembolic disorders, and active liver disease. Alternatives to HT should be advised for women with or at increased risk for these disorders. The lowest effective estrogen dose should be provided for the shortest duration necessary because risks increase with increasing age, time since menopause, and duration of use. Women

must be informed of the potential benefits and risks of all therapeutic options, and care should be individualized, based on a woman's medical history, needs, and preference.

Shah.D, Agrawal.S.(2010) reported that viewpoint from the Indian subcontinent and management of a common menopausal problem. Vasomotor symptoms (VMS) are recognized to adversely affect the quality of life. The prevalence and the magnitude of VMS may vary across populations. Although a natural regression of VMS may be expected over a period of time, it remains the most common of symptoms for which women seek help. Menopausal hormone therapy (MHT) is currently the only treatment approved by the Food and Drug Administration that has shown uniform benefit in the management of VMS. In clinical situations when estrogen is or may be contraindicated, a finite number of alternative options, including use of neuroactive agents (SSRIs, SSNRs, and gabapentin), lifestyle changes, and nonprescription remedies such as phytoestrogens and black cohosh have been shown to provide relief, albeit with mixed results and questionable safety. Existing data identify an ethnic variation in the degree and frequency of VMS of aging; in this latter context, the Asian woman's perspective is dominantly conveyed from the perspective of Chinese and Japanese ethnicities, whereas data regarding the magnitude of burden of VMS in the postmenopausal women from other Asian ethnicities and races are sparse. This article reviews the symptoms and relates that VMS are of significant concern for the aging Asian women.

Pinkerton JV, Stovall DW, Kightlinger RS.(2009)conducted study on Advances in the treatment of menopausal symptoms. Vasomotor symptoms and vaginal atrophy are both common menopausal symptoms. Hormone therapy is currently the only FDA-approved treatment for hot flashes. Current recommendations are to use the lowest dose of hormone therapy for the shortest period that will allow treatment goals to be met. Although the reanalysis of the WHI in 2007 by Roussow et al. provided evidence of coronary heart safety for users of hormone therapy under the age of 60 years and within 10 years of the onset of menopause, not all women desire or are candidates for hormone therapy. In this review we present an evidence-based discussion considering the effectiveness of hormonal and nonhormonal therapies for

the relief of vasomotor symptoms and vaginal atrophy. Concern exists regarding systemic absorption of vaginal estrogen and possible adverse effects on the breast and uterus. Selective estrogen receptor modulators and estrogen agonists offer benefits through targeted estrogen agonist/antagonistic effects and are being evaluated with and without estrogen for symptomatic menopausal women. Centrally acting nonhormonal therapies that are effective for the relief of vasomotor symptoms include various antidepressants, gabapentin and clonidine. A limited number of clinical trials have been conducted with nonprescription remedies, including paced respiration, yoga, acupuncture, exercise, homeopathy and magnet therapy, and some, but not all of these, have been found to be more effective than placebo. Dietary herbal supplements, such as soy and black cohosh, have demonstrated mixed and inconclusive results in placebo-controlled trials. Potential therapies for vasomotor symptoms and vaginal atrophy require randomized, placebo-controlled trials of sufficient duration to establish efficacy and safety. Agents under investigation for vasomotor symptoms relief include neuroactive agents, such as gabapentin and desvenlafaxine; an estrogen receptor-beta-targeted herbal therapy, MF-101; and the selective estrogen receptor modulator, bazedoxifene, paired with estrogen.

Geller SE, Studee L.(2005) conducted study on Botanical and dietary supplements for menopausal symptoms. Approximately two thirds of women who reach menopause develop menopausal symptoms, primarily hot flashes. Hormone therapy long was considered the first-line treatment for vasomotor symptoms. However, given the results of the Women's Health Initiative (WHI), many women are reluctant to use exogenous hormones for symptomatic treatment and are turning to botanicals and dietary supplement (BDS) products for relief. Despite the fact that there is limited scientific evidence describing efficacy and long-term safety of such products, many women find these natural treatments appealing. Perimenopausal and postmenopausal women are among the highest users of these products, but 70% of women do not tell their healthcare providers about their use. Compounding this issue is the fact that few clinicians ask their patients about use of BDS, The evidence to date suggests that black cohosh is safe and effective for reducing menopausal symptoms, primarily hot flashes and possibly mood disorders. Phytoestrogen extracts, including soy foods and red clover, appear to have at best only minimal effect on menopausal symptoms but have positive health effects on plasma lipid concentrations

and may reduce heart disease. St. John's wort has been shown to improve mild to moderate depression in the general population and appears to show efficacy for mood disorders related to the menopausal transition. Other commonly used botanicals have limited evidence to demonstrate safety and efficacy for relief of symptoms related to menopause.

Drosdzol A, et.al.,(2004) reported that Phytoestrogens--an alternative to hormonal replacement therapy.Perimenopausal period is associated with the reduction of endogenous estrogens which might lead to many disorders of general health in women. Traditional hormone replacement therapy (HRT) is effective for controlling vasomotor symptoms and reducing the risk of cardiovascular disease and osteoporosis in postmenopausal women. However, according to the latest studies, many women are reluctant to initiate this therapy because of concerns regarding the benefits and risks considering contraindications and side effects of it. Therefore, a lot of studies were carried out to find the influence of phytoestrogens on menopausal symptoms. Phytoestrogens are defined as naturally occurring compounds, found in plants; they have a variety of activities: estrogenic and antiestrogenic.

Farrell E.(2003) reported that Medical choices available for management of menopause.The indications for hormone therapy (HT) have changed markedly since the 1980s; they now include the treatment of menopausal symptoms and the prevention and treatment of osteoporosis in the short term. Long-term therapy is discouraged because of the small increase in risk of breast cancer after 5 years of therapy. Careful assessment of the midlife woman allows for individualized risk-benefit analysis with the formulation of a specific health management plan. Lifestyle advice and modification form the cornerstone of management-followed by therapeutic options if appropriate indications exist. In some industrialized countries alternative therapies are preferred despite little scientific evidence of their efficacy. The choices of hormonal products have increased, with the introduction of new formulations and routes of administration allowing for more optimal treatment of the menopause, especially in the presence of concurrent medical conditions, for example, diabetes, breast cancer or fibroids.

Pinkerton JV, Santen R.(2002)found out that study on use of alternatives to estrogen for treatment of menopause. Women frequently chose alternatives to hormone replacement therapy (HRT) for treatment of menopause even though medical indications for estrogens may be present. Prior breast cancer or fear of breast cancer is a major consideration. This review of alternatives to estrogen discusses the evidence linking breast cancer to HRTs and compares potential risks and benefits of HRT to non HRT alternatives for relief of vasomotor symptoms, vaginal atrophy, neurocognitive changes and prevention of heart disease and osteoporosis. Practical guidelines are suggested for use of alternatives for each problem.

Tóth KS. (2000) inferred thatMenopause and hormone replacement therapy. Due to the improving life expectancy of women spend third of their active life after the menopause. Estrogen deficiency can be caused by both natural and artificial menopause. The lack of estrogen can directly worsen the quality of life and epidemiological evidence suggests association with development of certain diseased states. Hormone replacement with natural estrogens has been proven to be successful for various indications: it reduces the menopausal vasomotor and psychological symptoms thus improving quality of life. It can also be used to prevent harmful effects of estrogen deficiency in various organs. Literature review supports the role of estrogen in atherosclerosis and osteoporosis prevention. Further evidence required establishing the role of estrogens in secondary prevention of coronary artery disease. Currently the relative risk increase of breast cancer during long-term hormone replacement therapy cannot be exactly measured. Nevertheless, substantial reduction of mortality in estrogen receptor positive breast cancer can also be seen with women on hormone replacement as compared to controls. Some data support the negative correlation of residual but still detectable, endogen estrogen and atherosclerosis and similarly to osteoporosis. The same residual estrogen levels seem to correlate positively with breast cancer. The recognition (and further acceptance) of the role of the residual estrogens might have influence on the indication, choice and dosage of preparation and duration of hormone replacement therapy. Overall evidence is in favor of the need medical attention for menopause: which ranges from preventive screening to long term hormone replacement therapy. The decision to treat requires the risks and benefits taken into consideration. This highly specialized care is provided in menopause clinics in Hungary. New oestrogen like agents are being

developed like the selective estrogen receptor modulators, the tibolone and the phyto-estrogens. They provide tissue-specific effect acting as estrogen agonistics, sustaining the beneficial preventive and therapeutic effects of the estrogens, but in the breast and endometrial tissue they behave like estrogen antagonists avoiding the side effects of the current used estrogen's. They might play a significant role in the treatment of menopause in the future. Collectively, findings of these studies suggest that yoga-based and certain other mind-body therapies may be beneficial for alleviating specific menopausal symptoms.

II. Studies related to hot flushes and night sweats among menopausal women.

Mold JW, et.al,(2004)exposed cross sectional study on Prevalence and predictors of night sweats, day sweats, and hot flashes in older primary care patients. Among the 795 patients, 10% reported being bothered by night sweats, 9% by day sweats, and 8% by hot flashes. Eighteen percent reported at least 1 of these symptoms. The 3 symptoms were strongly correlated. Factors associated with night sweats in the multivariate models were age (odds ratio [OR] 0.94/y; 95% confidence interval [CI], 0.89-0.98), fever (OR 12.60; 95% CI, 6.58-24.14), muscle cramps (OR 2.84; 95% CI, 1.53-5.24), numbness of hands and feet (OR 3.34; 95% CI, 1.92-5.81), impaired vision (OR 2.45; 95% CI, 1.41-4.27), and hearing loss (OR 1.84; 95% CI, 1.03-3.27). Day sweats were associated with fever (OR 4.10; 95% CI, 2.14-7.87), restless legs (OR 3.22; 95% CI, 1.76-5.89), lightheadedness (OR 2.24; 95% CI, 1.30-3.88), and diabetes (OR 2.19; 95% CI, 1.22-3.92). Hot flashes were associated with nonwhite race (OR 3.10; 95% CI, 1.60-5.98), fever (OR 3.98; 95% CI, 1.97-8.04), bone pain (OR 2.31; CI 95%: 1.30-4.08), impaired vision (OR 2.12; 95% CI, 1.19-3.79), and nervous spells (OR 1.87; 95% CI, 1.01-3.46). All 3 symptoms were associated with reduced quality of life.

Moe KE., (2004)has conducted study on Hot flashes and sleep in women. Sleep disturbances during menopause are often attributed to nocturnal hot flashes and 'sweats' associated with changing hormone patterns. This paper is a comprehensive critical review of the research on the relationship between sleep disturbance and hot flashes in women. Numerous studies have found a relationship between self-reported hot flashes and sleep complaints. However, hot flash studies using objective sleep assessment techniques such as polysomnography, actigraphy, or quantitative

analysis of the sleep EEG are surprisingly scarce and have yielded somewhat mixed results. Much of this limited evidence suggests that hot flashes are associated with objectively identified sleep disruption in at least some women. At least some of the negative data may be due to methodological issues such as reliance upon problematic self-reports of nocturnal hot flashes and a lack of concurrent measures of hot flashes and sleep. The recent development of a reliable and non-intrusive method for objectively identifying hot flashes during the night should help address the need for substantial additional research in this area. Several areas of clinical relevance are described, including the effects of discontinuing combined hormone therapy (estrogen plus progesterone) or estrogen-only therapy, the possibility of hot flashes continuing for many years after menopause, and the link between hot flashes and depression.

Randolph JF Jr,et.al,(2005)had conducted study on The relationship of longitudinal change in reproductive hormones and vasomotor symptoms during the menopausal transition. At baseline, 3302 menstruating women who belonged to one of five ethnic/racial groups were recruited and followed up with annual visits. Frequencies of symptoms (**hot flashes**, **night sweats**) for the prior 2 wk and measures of other covariates as well as potentially confounding variables were self-reported in the annual interview. This analysis incorporated available longitudinal data from 3293 women, excluding information collected at or after first report of hormone therapy use or hysterectomy. Data were analyzed using longitudinal marginal logistic regression models and a partial proportional odds model. Author emphasis, after adjusting for age, body mass index, and other related covariates, VMS prevalence increased with higher (log)FSH concentrations, and the increase was greater when blood was drawn more than 5 d after menses began. FSH concentrations were positively associated with the frequency of either **hot flashes** or **night sweats**, and higher FSH concentrations were associated with greater odds of reporting more frequent symptoms. Vasomotor symptom prevalence decreased with higher (log)E2, (sqrt)SHBG, and (log)FEI but only when these hormone values were modeled independently of (log)FSH values and the specimens were obtained outside the d 2-5 window. When modeled simultaneously with (log)FSH, (log)E2, (sqrt)SHBG, and (log)FEI were no longer significantly associated with symptom prevalence. (Cubic root)T and (sqrt)DHEAS concentrations and (log)FTI were not associated with the prevalence of VMS.

Sievert LL,et.al,(2006) carried out a study on Determinants of hot flashes and night sweats. Participants were 293 women, aged 45 to 55, randomly selected from automated demographic and membership records of a health maintenance organization in the northeast USA.Hot flashes during the month before interview were reported by 57% of the participants, although only 9% of the entire sample reported hot flashes to be "bothersome". Night sweats were reported by 36% of all participants, with 6% reporting night sweats to be "bothersome". Fifty-four percent of women reporting hot flashes also reported night sweats. In logistic regression analyses that controlled for menopause status and use of hormone therapy (HT), daily alcohol consumption significantly increased the risk of hot flashes, night sweats, and bothersome night sweats. Higher education and an excellent self-rating of health decreased the risk of night sweats, but not hot flashes. Smoking increased the risk of bothersome hot flashes, but not bothersome night sweats.

Deecher DC et.al, (2007)conducted study on Understanding the pathophysiology of vasomotor symptoms (hot flushes and night sweats) that occur in peri menopause, menopause, and post menopause life stages. Vasomotor symptoms (VMS), commonly called hot flashes or flushes (HFs) and night sweats, are the menopausal symptoms for which women seek treatment during menopause most often. VMS are a form of temperature dysfunction that occurs due to changes in gonadal hormones. Normally, core body temperature (CBT) remains within a specific range, oscillating with daily circadian rhythms. Physiological processes that conserve and dissipate heat are responsible for maintaining CBT, and tight regulation is important for maintenance of optimal internal organ function. Disruption of this tightly controlled temperature circuit results in exaggerated heat-loss responses and presents as VMS. The mechanistic role related to changes in gonadal hormones associated with VMS is not understood. Hormone therapy is the most effective treatment for VMS and other menopausal symptoms. Estrogens are known potent neuromodulators of numerous neuronal circuits throughout the central nervous system. Changing estrogen levels during menopause may impact multiple components involved in maintaining temperature homeostasis. Understanding the pathways and mechanisms involved in temperature regulation, probable causes of thermoregulatory dysfunction, and "brain adaptation" will guide drug discovery efforts. This review considers the processes and pathways involved in normal temperature regulation and

the impact of fluctuating and declining hormones that result in VMS during the menopausal transition.

Williams RE.et.al,(2008) conducted study on frequency and severity of vasomotor symptoms among peri- and postmenopausal women in the United States. The prevalence of vasomotor symptoms was 79% in peri- and 65% in postmenopausal women. Women with daily vasomotor symptoms had an average of 2.5 very mild/mild, 2.6 moderate, 2.5 severe, and 1.4 very severe daytime hot flushes in a typical day. Women with night sweats every night had an average of 2.4 moderate, 3.2 severe, and 2.7 very severe night sweats in a typical night. Overall, 9% of peri- and 7% of postmenopausal women reported 7+ moderate to very severe vasomotor symptoms in a typical day. Although some women reported that symptoms were worse in the evening and in the summer, many women reported they were consistent, both throughout the day and throughout the seasons of the year.

Rendall MJet.al,(2008**)** hadconducted exploratory study on The Hot Flush Beliefs Scale: a tool for assessing thoughts and beliefs associated with the experience of menopausal hot flushes and night sweats. A total of 103 women, between the age group 41 and 64 years completed the initial measure. Exploratory factor analysis culminated in a 27-item measure comprising three dimensions: beliefs about self in social context; beliefs about coping with hot flushes; beliefs about coping with night sweats/sleep. The HFBS was internally consistent, with subscale alphas ranging from 0.78 to 0.93, and test-retest reliability 0.74-0.78. Validity was supported through correlations with other measures of mood and menopause beliefs.

Thurston RC, et.al,(2008) made cross sectional study on Beyond frequency: who is most bothered by vasomotor symptoms? In multivariable models controlling for hot flash frequency, negative affect (odds ratio [OR] = 1.27, 95% CI: 1.08-1.51), symptom sensitivity (OR = 1.18, 95% CI: 1.03-1.37), sleep problems (OR = 1.38, 95% CI: 1.04-1.85), poorer health (OR = 1.24, 95% CI: 1.03-1.48), duration of hot flashes (OR = 1.14, 95% CI: 1.06-1.23), younger age (OR = 0.94, 95% CI: 0.89-0.99), and African American race (vs white, OR = 1.59, 95% CI: 1.12-2.26) were associated with hot flash bother. After controlling for night sweatsfrequency and covariates, sleep problems (OR = 1.84, 95% CI:1.33-2.55) and night sweats duration (OR = 1.10, 95% CI: 1.02-1.20) were associated with night sweatsbother.

Svartberg J, et.al,(2009) conducted prospective population- based study on Vasomotor symptoms and mortality. It included 867 postmenopausal women who provided lifestyle and menopause-related history at the 1984 to 1987 visit of the Rancho Bernardo Study and answered a 1989 mailed questionnaire on menopause and vasomotor symptoms. Ninety-eight percent were followed for vital status through July 2004.Overall, 73% reported hot flashes, of whom 39% also reported night sweats. During the 11.5-year average follow-up, there were 405 deaths, of which 194 were attributed to CVD and 71 to CHD. Hot flashes alone were not associated with all-cause mortality, but women who, in addition to hot flashes, also had night sweats had an almost 30% (hazard ratio [HR], 0.72; 95% CI, 0.55-0.94) lower all-cause mortality risk compared with women without this symptom, independent of body mass index, past or current use of estrogen or progestin, physical exercise, and smoking habit. There was a similar lower risk of CVD and CHD mortality in women with night sweats when adjusted for past or current use of estrogen or progestin (HR, 0.62; 95% CI, 0.42-0.92 and HR, 0.51; 95% CI, 0.26-0.99, respectively). These associations were independent of hormone use but were no longer significant after adjusting for body mass index, physical exercise, and smoking.

Keyzer JJ, et.al, (2009) inferred that Vasomotor symptoms are associated with a lower bone mineral density. We used data from a population-based sample of 5,600 women, aged 46 to 57 years and free from bone diseases, Flushing was reported by 39% of all women, and night sweats, by 38% of all women. The average BMD was 1.01 +/- 0.14 g/cm and decreased with increasing frequency of flushing (P for trend < 0.0001) and night sweats (P for trend = 0.03). After multivariate adjustments for age, body mass index, menopause status, smoking, education, exercise, and hormone use, women with the highest frequency of symptoms had a 0.022 g/cm (95% CI, -0.03 to -0.01) lower BMD compared with asymptomatic women. Women who reported having the highest frequency of night sweats had a 0.011 g/cm (95% CI, -0.02 to -0.001) lower BMD compared with women with no symptoms of night sweats.

Chedraui P, et.al,(2010)have carried out a cross-sectional study on Perceived control over menopausal hot flushes in mid-aged women**.** Healthy women aged 40-59 years, seeking healthcare centres of eight main cities of Ecuador with more than 100,000 inhabitants, were assessed with the Menopause Rating Scale (MRS) and

those presenting HFs were requested to fill out the Perceived Control Index (PCI) and a questionnaire containing socio-demographic data (female and partner).A total of 1154 women participated in this study of which 56% presented HFs (n = 646). According to the MRS, 29.1% and 9.1% of these HFs were graded as severe and very severe, respectively. Mean age of women presenting HFs was 49.5 +/- 5.2 years, with 51.9% having 12 years or less of education, 61.5% being postmenopausal and 47.2% living in high altitude. At the moment of the survey 13.9% were on hormone therapy, 12.8% on phytoestrogens and 7.1% on psychotropic drugs. There was a significant decreasing trend for PCI scores (total and difficulty in control items) from one menopausal stage to the next, with no differences observed for time since menopause onset. Despite this, logistic regression analysis determined that HF severity, as determined with the MRS, was the only single predictive factor related to lower HF perceived control (total PCI score <38) (OR: 1.83 CI 95% [1.15-2.90], $p < 0.01$).

Pérez-López FR, et.al,(2010)have made a study on Beliefs regarding menopausal hot flushes among climacteric women as assessed with the Hot Flush Beliefs Scale. A total of 646 presented HFs (56%) graded according to the first item of the MRS as mild (28.6%), moderate (33.2%), severe (29.1%) and very severe (9.1%). Mean age of these women was 49.5+/-5.2 years, with 51.9% having 12 or less years of education, 61.5% being postmenopausal and 47.2% living in high altitude. At the moment of the survey 13.9% were on HT, 12.8% on phytoestrogens and 7.1% on psychotropic drugs. Women strongly disagreed in more negatively oriented items of those contained in subscale one (beliefs about self in social context). Contrary to this, women strongly agreed in more negative oriented items contained in subscale two which assesses beliefs about coping with HFs. Women presenting with severe-very severe HFs displayed higher HFBS total and subscale scores indicating a more negative belief regarding HFs. Logistic regression analysis determined that HF severity was related to higher HFBS scores for the total and subscales one and two. Current smoking, higher parity, lower female education, female psychiatric consultation, time since **menopause** and partner unhealthiness and alcohol consumption were also related to higher HFBS scorings. Postmenopausal status and church attendance were related to lower scores.

Hunter MS,.et.al,(2011)conducted study on The Hot Flush Behavior Scale: a measure of behavioral reactions to menopausal hot flushes and night sweats. Behavioral items were generated from the empirical literature and qualitative studies based on in-depth interviews, with the aim of reflecting common behaviors related to HF/NS. A total of 140 women who had HF/NS completed the initial measure. Principal components analyses were applied to the data, with orthogonal rotation, to determine the most coherent and interpretable solution. Exploratory factor analysis culminated in an 11-item measure comprising three dimensions: behavioral avoidance, practical cooling behaviors, and positive behavioral strategies. The Hot Flush Beliefs Scale subscales had reasonable internal consistency, with α values ranging from 0.59 to 0.76. Validity was supported through correlations with measures of HF/NS problem rating and frequency and cognitive measures (HF/NS beliefs).

Ozkaya E, et.al, (2011)haveconducted study on Impact of hot flushes and night sweats on carotid intima-media thickness and bone mineral density among postmenopausal women. The presence of both hot flushes and night sweats was associated with a CIMT of more than 0.80 mm after adjusting for age, time since menopause, and body mass index (adjusted odds ratio 3.2; 95% confidence interval [CI], 2.3-4.5; P<0.001). The adjusted odds ratio for a CIMT higher than 0.80 mm in women with night sweats was 3.6 (95% CI 1.5-8.9; P=0.006); the adjusted odds ratio in women with hot flashes was 23.1 (95% CI 9.1-58.4; P<0.001). The mean CIMT was 0.65±0.08 mm in the asymptomatic group and 0.81±0.06 mm in the symptomatic group (P<0.001). The mean lumbar (L1, L2, and L3) and total hip BMD values were lower in the symptomatic group (P<0.05).

Hall E, et.al,(2011) conducted study on Non-hormonal treatment strategies for vasomotor symptoms: a critical review.Hotflushes are the most commonly reported symptoms during the menopause transition and early postmenopausal years, they affect 60-90% of women and can lead to significant physical discomfort and functional impairment. The emergence of hot flashes and night sweats (also known as vasomotor symptoms [VMS]) coincide with a period in life that is also marked by dynamic changes in hormone and reproductive function that interconnect with the aging process, changes in metabolism, lifestyle behaviors and overall health. Estrogen-based therapies have long been the treatment of choice for women suffering

from VMS. More recent concerns over long-term safety of menopausal hormone treatments, however, have led physicians and patients to pursue non-hormonal strategies to alleviate their symptoms. e.g. VMS with and without concomitant depression or VMS following the use of anti-estrogen therapies. Overall, efficacy data support the use of some psychotropic medications, including selective serotonin reuptake inhibitors, serotonin-nor epinephrine reuptake inhibitors and gabapentin. Complementary and alternative methods for VMS also showed limited but promising results, although more definitive studies are warranted. Clinicians should therefore be able to tailor treatment strategies for those who are unable or unwilling to use hormones to alleviate VMS and improve overall functioning and quality of life.

Gast GC, et.al,(2011)have inferred through a study on Vasomotor menopausal symptoms which are associated with increased risk of coronary heart disease. Data used were from a Dutch and Swedish population-based sample of 10,787 women aged 46 to 64 years, and free of CVD at baseline. Data on VMS were collected by questionnaires. Body mass index and blood pressure were measured in all women, and total cholesterol levels were measured in a subgroup of the population. Multivariable Cox regression models were used to analyze the data. After a mean ± SD follow-up period of 10.3 ± 2.1 years, 303 women were diagnosed with CHD. Symptoms of flushing were not associated with risk of CHD. However, the presence of night sweats was associated with a significantly modest increased risk of CHD, with a multivariable-adjusted hazard ratio of 1.33 (95% CI, 1.05-1.69). This association was attenuated but not eliminated after correction for body mass index, blood pressure, and total cholesterol (hazard ratio, 1.25; 95% CI, 0.99-1.58).

Haqqani JR.et.al,(2011) have conducted study on an investigation of discordance between subjective and physiological measures of vasomotor symptoms. Twenty-seven menopausal women completed questionnaires assessing beliefs about HF/NS, mood, stress, somatic amplification and subjective (frequency and problem-rating) and objective (24-h SSC) HF/NS measures.On average, 48 HF/NS were reported per week; 47% of objectively recorded HF/NS were accompanied by a subjective response and 56% of subjectively recorded HF/NS were accompanied by an objective recording. Concordant HF/NS were more likely to be moderate or severe, while over-reported (false-positive) HF/NS tended to be mild or

moderate; night sweats were more likely to be under-reported. Anxiety, somatic amplification and body mass index were associated with negative beliefs about HF/NS and, in turn, negative beliefs were associated with more problematic HF/NS.

Thacker HL (2011) found out that Assessing risks and benefits of non hormonal treatments for vasomotor symptoms in perimenopausal and postmenopausal women. Hormone therapy (HT) remains the most effective treatment available, but there will always remain a need for nonhormonal options. Evidence does not support the efficacy of alternative or over-the-counter products, such as Phytoestrogens and black cohosh, and their long-term safety is largely unknown. There is evidence supporting the efficacy of selective serotonin reuptake inhibitors (SSRIs) and serotonin-nor epinephrine reuptake inhibitors (SNRIs) for the management of VMS from clinical trials of paroxetine, venlafaxine, and desvenlafaxine. Gabapentin appears to be effective, but the doses required may cause poor tolerability and reduced patient adherence. Data also suggest that clonidine has a modest effect at the expense of considerable adverse effects.

3.Studies related to effect of deep breathing exercises on hot flushes.

Whitcomb BW,et.al, (2007) conducted study on Physical activity and risk of hot flushes among women in midlife. This study included 512 perimenopausal and postmenopausal women who participated in a population-based study of midlife health in the Baltimore metropolitan area. Questionnaires assessed self-reported physical activity levels at various ages as well as frequency and severity of hot flashes. Multiple logistic regression was used to evaluate the association between physical activity prior to LMP and each of the hot flash outcomes.Highly active women between the ages of 35 and 40 were significantly more likely to report moderate to severe hot flashes (OR = 1.70, $p = 0.01$) and daily hot flashes (OR = 1.79, $p < 0.01$) than minimally active women in unadjusted models.

Booth-LaForceC,et.al, (2007) conducted study on a pilot study of a Hatha yoga treatment for menopausal symptoms.A prospective within-group pilot study was conducted. Participants were 12 peri- and post-menopausal women experiencing at least 4 menopausal hot flashes per day, at least 4 days per week. Assessments were administered before and after completion of a 10-week yoga program. Pre and post-treatment measures included: Severity of

questionnaire-rated menopausal symptoms (Wiklund Symptom Check List), frequency, duration, and severity of hot flushes (24-h ambulatory skin-conductance monitoring; hot-flash diary), interference of hot flushes with daily life (Hot Flash Related Daily Interference Scale), and subjective sleep quality (Pittsburgh Sleep Quality Index).Yoga classes included breathing techniques, postures, and relaxation poses designed specifically for menopausal symptoms. Participants were asked to practice at home 15 min each day in addition to weekly classes. Eleven women completed the study and attended a mean of 7.45 (S.D. 1.63) classes. Significant pre- to post-treatment improvements were found for severity of questionnaire-rated total menopausal symptoms, hot-flash daily interference; and sleep efficiency, disturbances, and quality. Neither 24-h monitoring nor accompanying diaries yielded significant changes in hot flashes.

Chattha R .et.al, (2008) have conducted randomized control study on Treating the climacteric symptoms in Indian women with an integrated approach to yoga therapy. One hundred twenty participants (ages 40-55 y) were randomly divided into two study arms, ie, yoga and control. The yoga group practiced an integrated approach to yoga therapy comprising suryanamaskara (sun salutation) with 12 postures, pranayama (breathing practices), and avartandhyan (cyclic meditation), whereas the control group practiced a set of simple physical exercises under supervision of trained teachers for 8 weeks (1 h daily, 5 days per week). The assessments were made by Greene Climacteric Scale, Perceived Stress Scale, and Eysenck's Personality Inventory before and after the intervention of the three factors of the Greene Climacteric Scale, the Mann-Whitney test showed a significant difference between groups ($P < 0.05$) in the vasomotor symptoms, a marginally significant difference ($P = 0.06$) in psychological factors but not in the somatic component. Effect sizes were higher in the yoga group for all factors. There was a significantly greater degree of decrease in Perceived Stress Scale scores ($P < 0.001$, independent samples t test) in the yoga group compared with controls (between-group analysis) with a higher effect size in the yoga group (1.10) than the control (0.27). On the Eysenck's Personality Inventory, the decrease in neuroticism was greater ($P < 0.05$) in the yoga group (effect size = 0.43) than the control group (effect size = 0.21) with no change in extroversion in either the yoga or control group.

CONCEPTUAL FRAME WORK

A conceptual frame work refers to concepts that structure to offer a frame work of prepositions for conducting research.

The study is designed to elicit the effectiveness of deep breathing exercise for women with hot flushes.

This section deals with theories and conceptual frame work related to the study. A theory refers to an abstract generalization that present a systematic explanation about new phenomena are interrelated phenomena but are loosely structured than theories. The conceptual frame work adopted for this study is based on the Ernestine Wiedenbach's helping art of clinical nursing theory (1970).

As the study is on the concept of reducing the frequency and severity of symptoms of hot flush with care for all menopausal women, the investigator has modified Wiedenbach's helping art of clinical nursing theory (1970). The center's functioning concept is that the need for professional nursing care increases as the need for medical care decreases.

Wiedenbach'sHelping Art of Clinical Nursing Theory (1970)

According to Wiedenbach's nursing is an art based on goal directed care. It consists of helping art and three steps.

Helping Art

Here the investigator explores with the women experience of discomfort due to hot flush in the menopausal period. It includes the following components.

Central purpose

- To reduce symptoms of hot flush
- To cope with day today activities
- To maintain menopausal women well being

Prescription

- Dressing in light layers,
- avoiding spicy foods and heat,

- Keep bedroom cool at night.
- Use fans during the day.
- Wear light layers of clothes with natural fibers such as cotton.
- Deep, slow abdominal breathing (six to eight breaths per minute). Practice deep breathing for 15 minutes in the morning, 15 minutes in the evening and at the onset of hot flashes.
- Exercise daily. Walking, swimming, dancing, and bicycling are all good choices.
- Eat a balance diet
- Increase vitamin E intake to 800mg/day.
- Drink 8 glasses of water

Realities

Agent	-	Investigator
Recipient	-	Menopausal women with hot flush
Goal	-	To reduce the symptoms of hot flush
Mean	-	prescription
Frame work	-	Human aspect of care

Step l - Identifying the need for help

Menopausal women with hot flush.

Step ll - Ministering needed help

Here the investigator formulated a plan with the women acceptance to implement the plan.

Step lll - Validating that a need for help was met

The word success is the sum of small efforts, repeated day in and day out. It validates the needed help that was delivered in achieving the central purpose.

This approach there by provides convincing evidence and effectiveness of Deep breathing exercise on hot flush among menopausal women.

This enables the investigator to make suitable decision and recommendation to either continue or withdraw, modify the intervention.

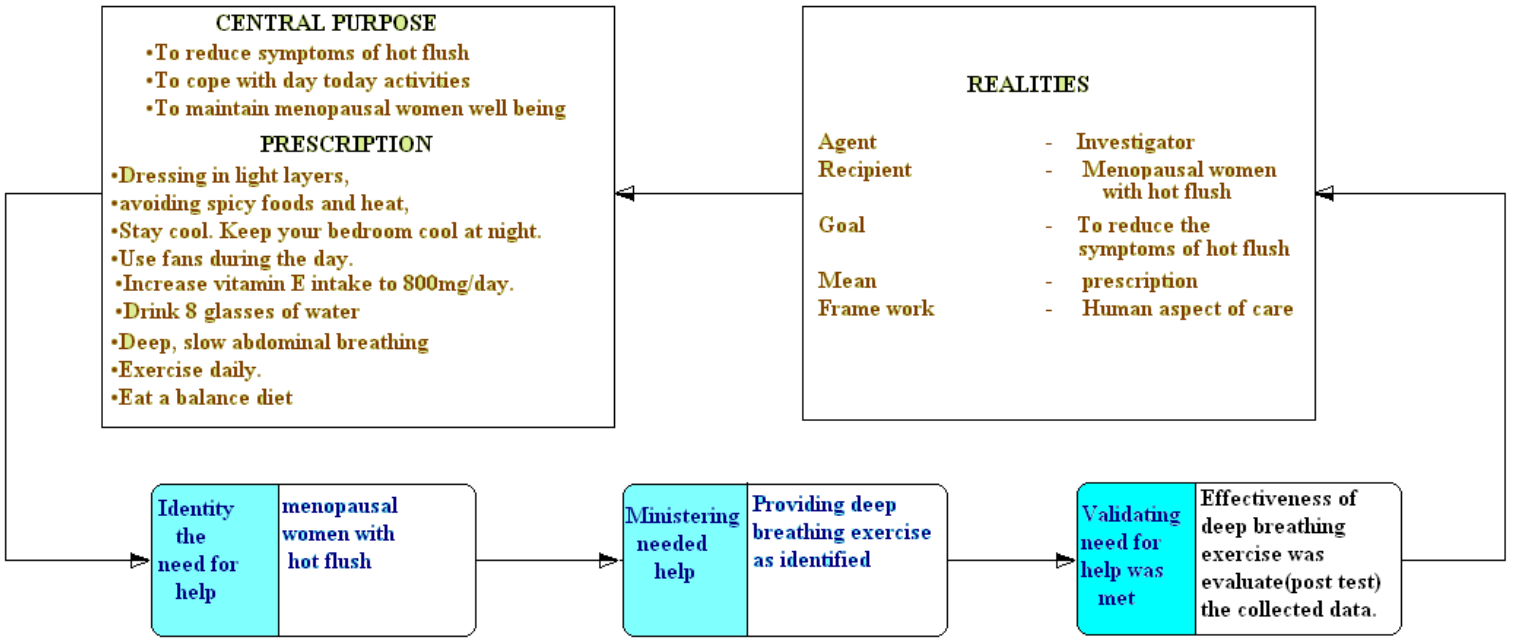


Fig MODDIFIED CONCEPTUAL FRAME WORK WITH APPLICATION OF WIEDENBACH'S - HELPING ART NURSING THEORY (1970)

CHAPTER-III

METHODOLOGY

Research methodology of the research study indicates the researcher's overall plan for obtaining answers to research questions and spells out the strategies that the researcher adopts to develop the information that is accurate, objective and interpretable. Research methodology includes research approach, research design, population, and sample, setting of study, sample techniques, selection and description of the tool, method of data collection, pilot study, and plan for data analysis.

RESEARCH APPROACH:

An experimental approach was used to evaluate the effectiveness of deep breathing exercise on hot flushes among menopausal women.

RESEARCH DESIGN:

Quasi experimental design: The pretest and posttest with control group design were adopted to evaluate the effectiveness of deep breathing exercise in reducing symptoms of hot flushes among menopause women.

The study design is schematically represented as follows:

Experimental Group	**O1**	**X**	**O2**
Control Group	**O1**	**-**	**O2**

O1 - Hot flush score before manipulation

O2 - Hot flush score after manipulation

X - Manipulation of independent variable through administration of deep breathingexercise.(Intervention)

SETTING OF THE STUDY:

This study was conducted in kaithari nagar, which is 10 km away from C.S.I JeyarajAnnapackiamCollege of nursing. There is a community health centre run by C.S.I JeyarajAnnapackiamCollege of nursing, keep in mind geographical distance time available for data collection, familiarity to the community and easy acquaintance and accessibility the investigator chosen this setting.

POPULATION

The target population selected for this study was menopausal women.

SAMPLE SIZE

The total number of sample size was 60 (30 were in experimental and 30 werein control group) menopausal women with hot flushes.

CRITERIA FOR SAMPLE SELECTION:

Selection of samples were done on the basis of following:

Inclusion criteria

Women who:

- experience hot flush
- were able to communicate in Tamil.
- were between 40 to 55 years of age.
- were willing to participate

Exclusion criteria:

Women who were:

- deaf, dumb and blind.
- diabetes mellitus and Thyroid disease.
- with any gynecological problems.
- with any psychiatric illness.
- underwent hysterectomy.

METHOD OF SAMPLING

Non Probability Purposive sampling was used for this study.

DESCRIPTION OF THE TOOL

In this study, data collection was done by using structured interview questionnaire. It consists of two parts.

PART-I

Questionnaire prepared by the investigator to collect the demographic data of the women. The demographic variables such as age, marital status, educational status,

occupation, monthly income of the family, type of family, duration of hot flush and frequency of hot flush.

Part-II

The modified hot flush belief scale consists of 25 statements based on symptoms of hot flush. It includes 5 columns for responses (Never, rarely, sometimes, mostly, always) with score of 0, 1,2,3,4 respectively.

SCORING PROCEDURE:

Part-II

Modified hot flush belief scale consists of 25 statements based on symptoms of hot flushes. It includes 5 columns forresponses (Never, rarely, sometimes, mostly, always) with a score of 0, 1,2,3,4 respectively.

Among 25 statements 1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 20, 22, 23 and 25 are positive statements scores and 7, 10, 13, 14, 15, 16, 17, 18, 19, 21 and 24 are negative statements, reverse the scores for statements 7, 10, 13, 14, 15, 16, 17, 18, 19,21 and 24.

Level of hot flushes was graded in to three categories.

Level of hot flushes	Scores	Percentage
Mild hot flushes	0 - 33	0 - 33%
Moderate hot flushes	34 - 66	34 - 66%
Severe hot flushes	67- 100	67 - 100%

VALIDITY

The validity of the tool was established in consultation with guide and which was evaluated and accepted by 5 experts in the field of obstetrics and gynecology nursing, obstetrician and gynecologist and statistician. The tool was modified according to the suggestions and recommendations of experts.

RELIABILITY

The reliability of the tool modified hot flush belief scale was assessed by testing the stability and internal consistency. The Karl pearson co-efficient formula was used to assess the stability by test retest method. The value was found to be reliable(r = 0.9).

DATA COLLECTION PROCEDURE

The purpose of the study was explained and permission was obtained from the village leader of kaithari nagar, Madurai to conduct the study. An initial rapport was established with the participants and the purpose of the study was explained to them. Oral consent was obtained from the subjects after explaining the purpose of the study. The data was collected for a period of 5 weeks in the Month of august from 60 samples. In this first 30 samples were in control group and the next 30 samples were treated as experimental group. First three days pretest was conducted for control group, each day 10 samples were selected. Next three days pretest was conducted for experimental group. First 30 minutes was spent for each woman to collect demographic variables and assessing the pre test level of hot flushes and sweat. 7th day onwards, after pretest for each woman, investigator had demonstrated deep breathing exercise for 10 minutes and made each woman to do return demonstration for 10 minutes. Post test was conducted on 5th week for both experimental groupand control group in kaitharinagarand assessed the level of hot flushes.

DATA COLLECTION SCHEDULE

Group	**Name of the place**	**Number of subject**	**Pretest**	**Intervention**	**Post test**
Control Group	Kaithari nagar	30	1-8-11 to 3-8-11	6-8-11 to 2-9-11	3-9-11 to 5-9-11
Experimental Group	Kaithari nagar	30	4-8-11 to 6-8-11		6-9-11 to 8-9-11

PLAN FOR DATA ANALYSIS

Dataanalysis was the systematic organization and synthesis of the research data and testing of the research hypothesis by using that data. The data collected from the subjects were planned to be used for analysis of data. Descriptive statistics and inferential statistics were used for data analysis.

REPORT OF THE PILOT STUDY

Pilot study was conducted for ten menopausal women (3 as control group and 3 as a experimental group) with hot flushes to find out the effectiveness of deep breathing exercise for reducing hot flushes and sweating at pasumalai for a period of 15 days to find out the feasibility of the study and to plan for data analysis on the basis of pilot study. Oral consent was obtained from the subjects after explaining the purpose of the study.

First day 3 women were selected for experimental group for data collection. First 30 minutes was spent for each woman to collect demographic variables and assessed the pretest level of hot flushes and sweats. Soon after the pretest, investigator demonstrated deep breathing exercise for 10 minutes and made women to do return demonstration for 10 minutes. Second day 5 women with hot flushes were selected as control group and only pretest was conducted without giving deep breathing exercise.post test was conducted on 16^{th}-17^{th} day for both experimental and control group and assessed the level of hot flushes and sweat.

The instrument and the interventions were modified and refined. The pilot study subjects were excluded from the main original study.

PRODECTION OF HUMAN SUBJECTS

Ethical consideration was taken into account for the purpose of study to evaluate the effectiveness of deep breathing exercise on hot flushes and sweat among pre and postmenopausal women. Each individual client was informed about the purpose of the study and confidentiality was promised and ensured. Informed consent was obtained from each client. The client had freedom to leave the study at her will without assigning any reason. Thus the ethical issues were ensured in this study.

CHAPTER - IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the description of sample characteristics, analysis and interpretation of the data collected from menopausal women with hot flushes to assess the effectiveness of deep breathing exercise.

Data analysis is the method of organizing data in such a way that the research questions can be answered. Interpretation is the process of making sense of the result and of examining the implication of the finding within a boarder context.

Using inferential and descriptive statistics based on the objectives of the study, the data was computed. The 'p' (probability) value less than 0.05 was considered as significant.

ORGANIZATION OF DATA

The data have been described and organized as follows:

Section A:

Distribution of menopausal women based on demographic variables.

Section B:

Assessing the pretest level of hot flush among menopausal women in experimental and control group.

Section C:

Assessing the posttest level of hot flush among menopausal women in experimental and control group.

Section D:

Differencebetween the pretest and posttest level of hot flush among menopausal women in experimental and control group.

Section E:

Association between pretest levels of hot flush in menopausal women with their demographic variables in experimental group and control group.

Table 1

Distribution of menopausal women based on demographic variables

N= 60

S. no	demographic variables	experimental group N = 30		control group N = 30	
		NO	%	NO	%
1	**Age in years:**				
	40-43yrs	10	33	5	17
	44-47yrs	11	37	9	30
	48-51yrs	5	17	7	23
	52-55yrs	4	13	9	30
2	**Marital status**				
	Unmarried	1	3	3	10
	Married	26	87	20	67
	Widowed	3	10	7	23
	Divorced	-	-	-	-
3	**Educational status**				
	Not literate	8	27	3	10
	Primary	20	67	21	70
	Middle school	1	3	6	20
	Higher secondary	-	-	-	-
	Graduate	1	3	-	-
4	**Occupation**				
	House wife	2	7	6	20
	Daily wage labor	26	86	22	74
	Retired	-	-	1	3
	Business	2	7	1	3
5	**Monthly income**				
	<3000	20	67	17	57
	3001-5000	10	33	11	36
	5001-8000	-	-	2	7
	>8000	-	-	-	-
6	**Type of family**				
	Nuclear family	30	100	30	100
	Joint family	-	-	-	-

7	**What is the duration of hot flushes?**				
	2 to 5mts	1	3	-	-
	5 to 10mts	19	64	11	37
	10 to 15 mts	10	33	17	56
	15 t0 30mts	-	-	2	7
8	**How often do you experience hot flushes?**				
	Once a day	6	20	4	13
	Once in a weak	5	17	8	27
	Twice in a weak	19	63	17	57
	Once in a month	-	-	1	3

Table 1 shows that around 9(30%) of women were between the age group of 44 - 47 years in control and 11(37%) in experimental group. Majority of women 26(87%) belong to married in experimental and 20(67%) in control group. Majority of them 19(64%) and 11(37%) were having duration of hot flush for 5 to 10 mts in control group and experimental group respectively. Most of them 19(63%) and 17(57%) had experienced of hot flush twice in a week in experimental and control group respectively.

Figure: 3

Distribution of women based on level of hot flushes in frequency and percentage of experimental and control group

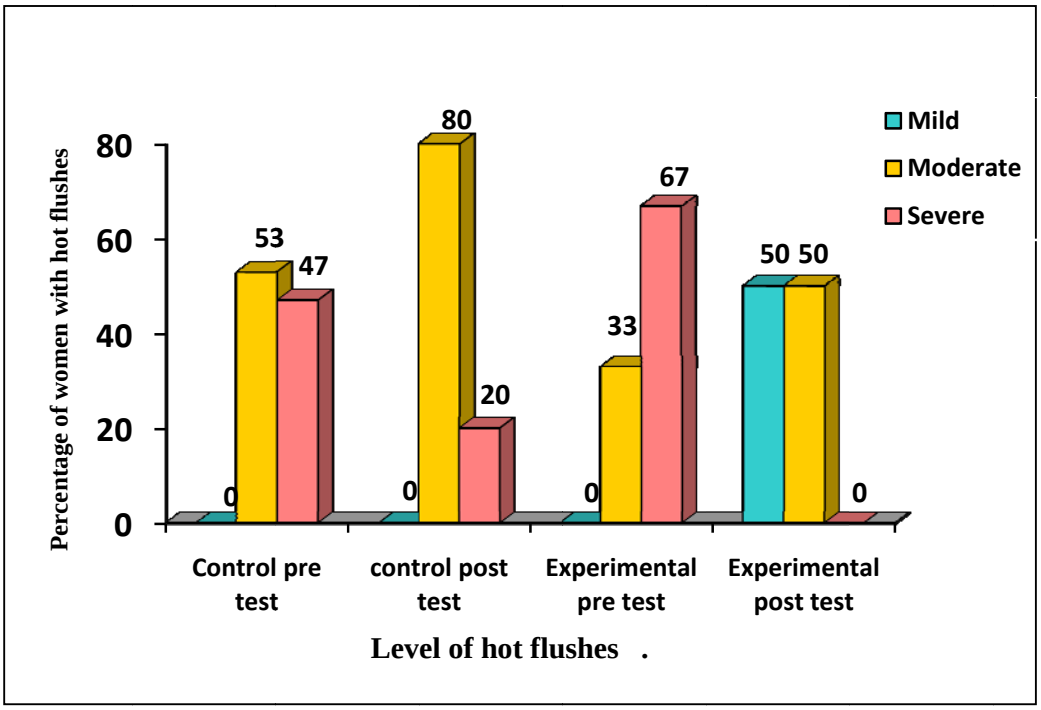


Figure 3 shows that in pretest, majority of women 20(67%) have severe hot flushes in experimental group, 16(53%) have moderate in control group. In the post test, half of the women with hot flush 15(50%) have moderate hot flush in experimental group, majority of women 24(80%) have moderate in control group. The experimental post test frequency insist that deep breathing exercise was effective in reducing hot flush symptoms.

Table 2

Distribution of women based on level of hot flushes in mean score, standard deviation and‘t’ value of experimental and control group.

level	Experimental group				‘t’ value	Control group				‘t’ value
	pre test		post test			pre test		post test		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Positive	42.83	6.28	10.83	3.96	23.49	39.3	5.81	36.4	4.55	2.91
Negative	27.83	5.15	19.6	2.54	7.923	27.93	4.79	25.74	2.97	4.60
Overall	70.67	8.89	30.57	3.54	24.314	67.13	5.39	62.13	4.46	3.892

(df = 29 , table value = 3.659 *** P<0.001 highly significant.)

Table 2 shows that the mean score of pre test and post test level of hot flush in experimental group were 70.67(8.89) and 30.57(3.54) respectively. The mean score of pre test and post test level of hot flush in control group were 67.13(5.39) and 62.13(4.46) respectively. The post test mean score 30.57(3.54) was lower than the pre test mean score 70.67(8.89), the ‘t’ value 24.31 which was significant at 0.001 level in the experimental group. The mean post test score of hot flush in the experimental group 30.57(3.54)was significantly lower than the mean post test scores of hot flush in the control group 62.13(4.46).These result shows that, deep breathing exercise was found to be effective in experimental group than control group.

Table 3

Association between pre test levels of hot flush in experimental group with their selected demographic variables.

Demographic Variable		Moderate	severe	chi square value	p-value
Age in years	40-43	3	7		
	44-47	2	9	#3.286	0.350
	48-51	3	2		
	52-55	2	2		
	Unmarried	0	1	#0.519	0.771
Marital status	Married	9	17		
	Widowed	1	2		
	Divorced	0	0		
	Not literate	3	5		
	Primary education	7	13		
Education	Middle school	0	1		
	Higher secondary	0	0	#1.088	0.78
	Graduate	0	1		
	House wife	2	4		
Occupation	Daily wages	8	14	#1.091	0.779
	Retired	0	0		
	Business	0	2		
	<Rs.3000	5	12		
	Rs.3001-5000	3	8		
Monthly income	Rs.5001-8000	2	0	#4.299	0.117
	Rs>8001	0	0		

Type of family	Nuclear family	10	20		
	Joint family	0	0	0	0
	2 to 5 mts	0	0		
Duration of hot flushes	5 to 10 mts	5	6		
	10 to 15 mts	3	14	6.61	0.037
	15 to 30 mts	2	0		
Experience hot flushes	Once a day	3	3		
	Once in a week	1	4	1.176	0.055
	Twice in a week	6	13		
	Once in a month	0	0		

***- significant # - not significant p<0.05**

Table 3 shows that there was no significant association between age, Marital status, education, occupation, monthly income of the women with their pretest score of hot flushes. So the above findings revealed that the deep breathing exercise has a significant effect in reducing hot flush symptoms.

CHAPTER – V

DISCUSSION

The study was conducted to evaluate the effectiveness of deep breathing exercises on hot flushes among menopausal women in selected community at kaithari nagar.60 samples were selected by purposive sampling, 30 were control group and 30 were experimental group and there hot flush level was assessed with a hot flush assessment scale. Then the menopausal women were taught and demonstrated to practice deep breathing exercise, about two times per day for 30 consecutive days with an aim to reduce hot flush. The hot flush level was reassessed by the same rating scale. The investigator found, there was makeable reduction in hot flush level.

The discussion is based on the objectives of the study

Objective 1

To assess the pretest level of hot flushes among menopausal women in both experimental and control group.

Rating scale was used to assess the pretest level of hot flushes among menopausal women in both control group and experimental group. In pretest, most of hot flush women 20(67%) were severe symptoms for experimental group, 16(53%) were moderatesymptoms in control group. Less number of hot flush women 10(33%) had moderate symptoms in experimental group 14(47%) were severe symptoms in control group.

These findings were consistent with the study done by Bharadwaj and kendurkar (2007) they found in their study that the mean age of menopause at Indian women is 45.03 years.

Objective 2

To assess the posttest level of hot flushes among menopausal women in both experimental and control group .

Rating scale was used to assess the posttest level of hot flushes among menopausal women in both control group and experimental group.In the post test, half of the women with hot flush 15(50%)had moderate hot flush in experimental group, majority of women 24(80%) had moderate in control group.15(50%) women had mild

hot flush in experimental group and 6(20%) were had severe in control group respectively. This study consistent with findings of the study conducted by Chattha R .et.al, (2008), stated that effect sizes were higher in the Deep breathing (pranayama) group for all factors. There was a significantly greater degree of decrease in Perceived Stress Scale scores ($P < 0.001$, independent samples t test) in the yoga group compared with controls (between-group analysis) with a higher effect size in the yoga group (1.10) than the control (0.27).

Objective 3

To find the difference between pre and post level of hot flushes among menopausal women in both experimental and control group.

The obtained control pretest mean score was 67.13 with a standard deviation of 5.39. The obtained control post test mean score was 62.13 with a standard deviation of 4.46. The obtained experimental pretest mean score was 70.67 with a standard deviation of 8.89. The obtained experimental post test mean score was 30.57 with a standard deviation of 3.54. The 'r' value is 0.92. This study consistent with the findings of the study conducted byBeth E. Cohen.et.al,(2006), Mean number of hot flushes per week decreased by 30.8% (95% CI 15.6-45.9%) and mean hot flush score decreased 34.2% (95% CI 16.0-52.5%) from baseline to week 8. No adverse events were observed

Objective 4

To find theassociation between pre testlevel of hot flush in experimental group with their selected demographic variables.

The current study findings revealed that there is no significant association between level of hot flush and selected demographic variables of experimental group such as age in years, marital status, education, occupation, monthly, and type of family.

The above findings revealed that the deep breathing exercise has a significant effect in reducing hot flush symptoms.

CHAPTER – VI

SUMMARY AND RECOMMENDATION

The essence of any research project lies on reporting and finding. This chapter gives a brief account of the present study including conclusions drawn from the findings, recommendations limitation of the study, suggestion for future studies and nursing implications.

THE MAIN FINDINGS OF THE STUDY

This study revealed that hot flush during in pretest, majority of women 20(67%) were severe hot flushes in experimental group, 16(53%) was moderate in control group. In the post test, half of the women with hot flush 15(50%) had moderate hot flush in experimental group, majority of women 24(80%) had moderate in control group.

The mean score of pre test and post test level of hot flush in experimental group were 70.67(8.89) and 30.57(3.54) respectively. The mean score of pre test and post test level of hot flush in control group were 67.13(5.39) and 62.13(4.46) respectively. The post test mean score 30.57(3.54) was lower than the pre test mean score 70.67(8.89), the 't' value 24.31which was significant at 0.001 level in the experimental group. The mean post test score of hot flush in the experimental group 30.57(3.54)was significantly lower than the mean post test scores of hot flush in the control group 62.13(4.46). Un paired 'T' test value (30.355) higher than the table value (3.46). The obtained 'T' value was found to be highly significant. It is inferred that the women who were practiced to deep breathing exercise had significant decrease in the post test hot flush score.

There was no significant association between demographic variables like age in years, marital status, education, occupation, monthly, and type of family.

CONCLUSION

1. The majority of the menopausal women with hot flush had moderate and severity level of hot flush before deep breathing exercise.
2. Deep breathing exercise was demonstrated for 30 minutes along with flash cards.
3. After demonstrating the deep breathing exercise, women used to do the exercise for 10 minutes in morning and 10 minutes in evening.
4. After practicing the deep breathing exercise for 30 days, the majority of the women had a reduction in the level of hot flushes.
5. There was a significant association between the pretest and post test in experimental group.
6. There was no significant association between the levels of hot flush and age in years, marital status, education, occupation, monthly income, types of family, duration of hot flush and experience of hot flush.
7. The hot flushes women felt comfortable, and co-operated well at the time of data collection.

IMPLICATIONS

The study has the following implications for nursing practice, nursing administration, nursing education and nursing research.

Implications for nursing practice

The findings suggest that nurses should increase focus on the menopausal women with hot flushes in the hospital as well as community.

1. The deep breathing exercise flash cards prepared by the investigator prepared based on the results can be utilized in the clinical setting and also in community setting to educate the women.
2. The finding of the study indicates that all the health team members should be encouraged to follow non – pharmacological treatment like deep breathing exercise during hot flushes to menopausal women who promote comfort and satisfaction.

Implications for nursing education

1. The study pushes the nursing curriculum to provide opportunities for students to learn about menopausal care.
2. The students may be able to educate and counsel the women in both clinical and community area, after attaining menopause, the student nurses needs to be educated regarding changes during menopause, its complications like hot flushes and also non pharmacological measures to overcome those problems
3. This study promotes nursing specialization in women health nursing.
4. The study enables the students to acquire knowledge about deep breathing exercise and its uses.
5. These findings suggest that students should increase their knowledge regarding early identification of hot flushes among menopausal women.

Implications for nursing administration

1. The findings of the study emphasize the nurse administrators should make plan to increase resources to support and maintain health care facilities of the menopausal women.
2. Administration of both private and government sectors should organize in-service education ad continuing education programme to update the knowledge of health personnel regarding menopause and the impact on health.
3. The nurse administer should give in-service education for the primary health centers and sub centers about menopause and the problems associated with it including the coping.

Implications for nursing research

1. Nursing theories must be formulated regarding menopausal women care based on new evolving research.
2. The finding of the study help to extend the scientific body of professional knowledge up on which further research can be conducted and based on this study, in depth research studies of various can be conducted.

RECOMMENDATIONS

- A comparative study can be done to assess the hot flushes of menopausal women in selected rural and urban area.
- A comparative study can be done to evaluate the effectiveness of deep breathing exercise on hot flushes among women and men.
- A experimental study can be done to evaluate the effectiveness of yoga in reducing stress during postmenopausal women.
- A descriptive study could be done to assess the hot flushes among menopausal women in urban area.
- A experimental study can be done to evaluate the effectiveness of deep breathing exercise on hot flushes among menopausal women in single and large group.
- A comparative study could be done to determine the effectiveness of HRT on hot flushes and who are not on HRT.
- A study could be done to evaluate the effectiveness of planned teaching program on menopausal problems and its management.
- A comparative study could be done to assess the perception of hot flushes among post menopausal and premenopausal women
- A correlation study could be done to assess the perception of menopausal problems among those who underwent a surgical menopause and to those who had a natural menopause.

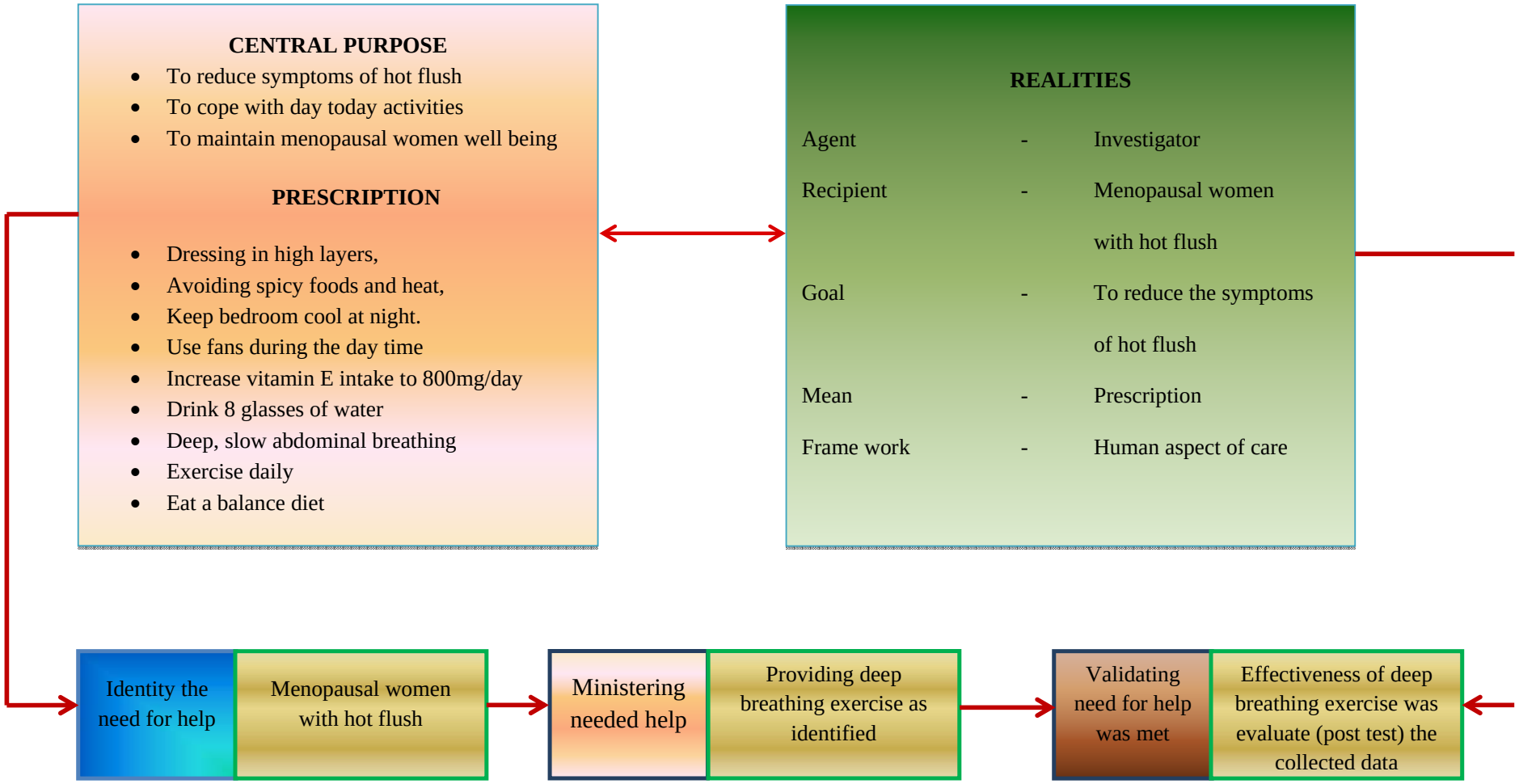


Fig. 1.Modified Conceptual Frame Work with Application of Wiedenbach's Helping Art Nursing Theory (1970)

REFERENCE

BOOKS

- Alma Douglas, G., (1999).”Practical statistics for medical research”, (1st Ed.). London: Chapman and Halt, 87-88.
- Basavanthappa.B.T. (1998), Nursing research. (1st Ed.), Jaypee puplication, New Delhi 150-210.
- Dawn. (2000), text book of obstetrics and gynecology. (9th Ed.), Saunders publication.142 -156.
- Dutta.D.C. (2005), Textbook of gynecology including contraception, (4thEd), New central book publications, 51-56.
- Emily slone & Susan Rowen (2005), Maternal and child health nursing, (2ndEd), Elesiver &Saunders publications, 781-784.
- Gulani.K. (2006), community health nursing, (1st Ed), Kumar publications, Delhi, 13-15.
- Lowder Milk, (1997), Maternity and women’s health care, (6th Ed), Mosby publication, 1158-1169.
- Park.K. (2009), Textbook of preventive and social medicine, (20th Ed), Bhanot publication, 16-17.
- Polit&Hungler, (2008), Nursing Research principles and methods, (7th Ed), Lippincott publications, 571-588.
- Sabaratnam, A.K. et.al, (2005). Essentials of gynecology”, (1st Ed.) New Delhi: Jaypee brothers, 231.
- Shenon et.al. (1991). Maternity nursing”, (3rd ed.), Philadelphia: Mosby, 304-333.

- Shaw, (1995), Textbook of gynecology, (11th Ed), Churchill Livingstone publication, 53-37.
- Speroff, L. (1994), Textbook of obstetrics and gynecology, (1st Ed), Yearbook medical publication, 112-116.
- Stud J.W. & Barber R. (1992), the menopause, (1st Ed.), Churchill Livingstone publication, 1-25.
- Susan Scott, (2009), Maternity and pediatric nursing, (1st Ed), Lippincott publication, 131-135.
- Suyakantha .A. (2009). Community medicines with recent advances, (1st Ed), Jaypee publishers, 34-45.
- Timothy's. Bredow, (1997), Middle range theories; application to nursing research, Health-related quality of life. 274-284.
- Usha.R. Krishna & Nozer .K. Sheriar, (2004), Obstetrics and gynecology in perspective menopause, (2nd Ed), Orient Logman Publication, India, 1-15.

JOURNALS

- AgrawalShonali (2005). Clinical trial to evaluate the role of "Menotab! - an alternative branch medicine in post menopausal Syndrome. Souvenir - Xth Annual IMS conference ?05, Ahmedabad. 5-6 Feb. ?05. pp 50.
- Banerji, Debabar. (1992). "Health policies and programmes in India in the Eighties?. Economic and Political Weekly, Vol. XXVII (12), March 21, 1992. Pp.599 - 605.
- BansalSurbhi and ThakerRajal (2005). Age, Symptoms & perception of menopause amongst under privileged women of Ahmedabad. Souvenir -Xth Annual IMS conference ?05, Ahmedabad. 5-6 Feb. ?05 pp-61.

- Buckshee, Kamal, Dhond, Abhay, J. &Suman (2000). Ultra-sonographic ovarian volume measurement in normal (Reproductive age group / post menopausal) & infertile women. The Journal of Obstetrics and Gynecology of India. 50(1), pp. 81
- Bunch, Charlotte. "Women?s Rights as Human Rights: Towards a Revision of Women?s Rights?. Women?s Health Journal, No.19, July-Sept.1990. Pp. 4-12.
- Chandra Prabha S. (1984) Psychiatry and Women?s Reproductive health. John Wiley & sons. New Delhi.
- ChandrawatiPritikumar and Agrawal, Sapna (2001). Bone mineral density by ultrasound densitometry in postmenopausal females – preliminary results. The Journal of Obstetrics and Gynecology of India. 51(5), pp. 152- 154.
- "Hot flashes ... in January." Canadian Medical Association Journal. 2004: 170 (1).
- Miller, Heather and Rose Maria Li, M.D. "Measuring Hot Flashes:Summary of a National Institutes of Health Workshop." Conference report. Mayo Clinic. June 2004: 79.
- North American Menopause Society (2010). Estrogen and progestogen use in postmenopausal women: 2010 position statement of the North American Menopause Society. Menopause, 17(2): 242–255.
- Pandya KJ, et al. (2005). Gabapentin for hot flashes in 420 women with breast cancer: A randomised double-blind placebo-controlled trial. Lancet, 366(9488): 818–824.
- Reddy SY, et al. (2006). Gabapentin, estrogen, and placebo for treating hot flushes. Obstetrics and Gynecology, 108(1): 41–48.
- Sikon, Andrea and Holly Thacker M.D. "Treatment for Menopausal Hot Flashes." Cleveland Clinic Journal of Medicine. July 2004: 71 (7).

- Stearns V, et al. (2003). Paroxetine controlled release in the treatment of menopausal hot flashes: A randomized controlled trial. JAMA, 289(21): 2827–2834.

NET

- Aaron R. et al, (2002), Medico social dimension of menopause, a cross sectional study rural south India, www.Pubmed.
- Barton D, Loprinzi CL: Making sense of the evidence regarding nonhormonal treatments for hot flashes. Clin J OncolNurs 8 (1): 39-42, 2004. [PUBMED Abstract]
- Beitz R. & Doren .M. (2004), Physical activity and postmenopausal health, Journal of British menopause society, June.10.70-74, www.pubmed.
- Borud EK, Alraek T, White A, et al.: The Acupuncture on Hot Flushes Among Menopausal Women (ACUFLASH) study, a randomized controlled trial. Menopause 16 (3): 484-93, 2009 May-Jun. [PUBMED Abstract]
- Cameron, M.E. (2004, Sep-Oct 20). Journal of professional Nursing, The ethical foundation of Yoga, Retrieved August 2009 from http://linkinghub. Elesevier.com/retrieve/pii/.
- Chen, K.M. (2007, Feb 5), Yoga exercise programme for older adult. Journal of advanced nursing, retrieved April 2009 fromhttp://www.ncbi.nlm.nih.gov/pubmed/17291207.
- CHETNA. (1993). "Women?s Health Awareness and Diagnostic Camp, 12th March 1993. CHETNA. Ahmedabad.

- Choi, M. (2001), Menopause and mood are they connected. www.pubmed.
- Dormire.S.L. (2003), what we know about managing hot flashes. www.epigee.org

- Emlet, C.A. (1979, Sep5). A psychological approach to institutionalized aged. Journal of American Health care Association. https://my.apa.org./apa/idm/login.seam?
- Erez, P. (2002, Jan-Feb 13). Living with Yoga. Positive awareness. http://www. Livingyoga.ca/.
- Gupta. N. (2006, Jan-Mar 28). Effects of Yoga based life style intervention, Indian journal of physiological pharmacology, from http://www.ncbi.nlm.nih.gov/pubmed/.
- Kevin D.Stein. (2006), Impact of hot flashes on quality of life among postmenopausal women. July. www.hqlo.medscape.com
- Loprinzi CL, Stearns V, Barton D: Centrally active nonhormonal hot flash therapies. Am J Med 118 (Suppl 12B): 118-23, 2005. [PUBMED Abstract]
- Morris E, Rymer J (2007). Menopausal symptoms, search date December 2006. Online version of BMJ Clinical Evidence. Also available online: http://www.clinicalevidence.com.
- Rittaluota, (2009), Hot flushes and quality of life during menopause, BMC woman's health. May.www.pubmed.medscape
- Wijma K, Melin A, Nedstrand E, et al.: Treatment of menopausal symptoms with applied relaxation: a pilot study. J BehavTherExp Psychiatry 28 (4): 251-61, 1997. [PUBMED Abstract]

APPENDIX-I

From

K.Roselinvasanthakumari

II year M.Sc (N) Student,

C.S.I. Jeyaraj Annapackiam College of Nursing,

Madurai.

To

Forwarded through

The principal,

Principal in charge

C.S.I. Jeyaraj Annapackiam College of Nursing,

Madurai.

Respected Sir / Madam,

Sub: Requisition for validating research tool - regarding,

With due regards, I kindly bring to your knowledge that I am a post graduate student of the C.S.I. Jeyaraj Annapackiam College of Nursing, Madurai. I have selected the below mentioned topic for dissertation to be submitted to the Tamilnadu Dr.M.G.R.Medical University, Chennai as a part of partial fulfillment of Master of Nursing Degree.

My dissertation topic is as follows:

"A quasi experimental study to evaluate the effectiveness of deep breathing exercise on hot flushes among menopausal women in selected community at madurai.

With regards I humbly request you to validate my study instruments. I will be grateful to you for this favour to me as early as possible.

Thanking you ,

Place: Madurai Your's Sincerely,

Date:

(K. ROSELIN VASANTHA KUMARI)

APPENDIX-II

LIST OF EXPERTS

1. **Dr. Malarkodi M.B.B.S., D.G.O., Dip.NB.**
Obstetrician.
Christian Mission Hospital,
Madurai-625 001.

2. **Dr. T.S. Varalakshmi M.B.B.S.,D.G.O.,**
Obstetrician,
Tiruparankundram P.H.C.
Madurai.

3. **Prof.Mrs. Merlin Jeyapal, M.sc [N]., (Ph.D.,)**
Vice Principal,
C.S.I. Jeyaraj Annapackiam College of nursing,
Madurai.

4. **Prof.Mrs. ShanthiM.Sc(N)., RN. RM.,**
H.O.D. of Obstetrics and gynecology department,
C.S.I. Jeyaraj annapackiam college of nursing,
Madurai.

5. **Prof. Mrs. Grace Kingston M.Sc(N).,(Ph.D.,)**
Principal,
Christian college of nursing,
Ambilikkai,
Dindugal.

6. **Mrs. SahayamaryM.Sc (N)., RN.RM.,**
Vice Principal,
Christian college of nursing,
Ambilikkai,
Dindugal.

7. **Prof.Mrs. ThamaraiSelviM.Sc (N).,(Ph.D.,)**
Matha college of Nursing,
Manamadurai.

8. **Mrs. R. Iliaya Rani, M.Sc (N).,**
Principal,
Shrinidhi College of health sciences & research,
Madurai-3.

9. **Prof. Mrs. JeyaThangaselvi,M.Sc (N)., (Ph.D.,)**
H.O.D. of Medical Surgical Nursing
CSI Jeyaraj annapackiam college of Nursing
Madurai.

10. **Prof. Mr. John Sam ArunPrabhu, M.Sc(N)., (Ph.D.,)**
H.O.D. of community Health Nursing,
CSI Jeyaraj annapackiam college of Nursing,
Madurai – 625004.

APPENDIX - III

From

K. Roselinvasanthakumari,

II year M.Sc (N) Student,

C.S.I. Jeyaraj Annapackiam College of Nursing,

Madurai.

To

Mr. John Sam ArunPrabhuM.Sc (N)., (PhD.,)

HOD community health nursing department,

CSI Jeyaraj Annapackiam College of nursing,

Pasumalai,

Madurai- 4

Respected sir,

Sub: seeking permission to conduct a search

With due regards, I kindly bring to your knowledge that I am a post graduate student of the C.S.I. Jeyaraj Annapackiam College of Nursing, Madurai. I have selected the below mentioned topic for dissertation to be submitted to the TamilnaduDr.M.G.R. Medical University, Chennai as a part of partial fulfillment of Master of Nursing Degree.

My dissertation topic is as follows:

“A quasi experimental study to evaluate the effectiveness of deep breathing exercise on hot flushes among menopausal women in selected community at madurai“

I request your goodness to grant me the permission to conduct the research project in the following area, kaithari nagar.

Thanking you,

Place: Madurai

Yours Sincerely,

Date:

(K.ROSELIN VASANTHA KUMARI)

APPENDIX – IV

From

K. Roselinvasanthakumarai,

II year M.Sc (N) Student,

C.S.I. Jeyaraj Annapackiam College of Nursing,

Madurai.

To

The village leader,

Kaithari Nagar,

Madurai.

Forwarded through

The principal,

Principal in charge

C.S.I. Jeyaraj Annapackiam College of Nursing,

Madurai.

Respected madam,

Sub: Request for permission to do data collection - regarding

I am a post graduate student of the C.S.I. Jeyaraj Annapackiam College of Nursing, Madurai under the Tamil Nadu Dr.M.G.R. Medical University, in partial fulfillment of requirement for the award of M.Sc (N) degree. I am conducting a research on the following topic.

"A quasi experimental study to evaluate the effectiveness of deep breathing exercise on hot flushes among menopausal women in selected community at Madurai"

I request your goodness to grant me the permission to conduct the research project in your area from, kaithari Nagar.

Thanking you,

Place: Madurai Yours Sincerely,

Date: (K.ROSELIN VASANTHA KUMARI)

APPENDIX-V

TOOL

Part-1

STRUCTURED INTERVIEW SCHEDULE FOR COLLECTING DEMOGRAPHIC DATA FROM THE RURAL MENOPAUSAL WOMEN.

Instructions: The following items seek information about you. kindly choose the appropriate and complete them by putting tick ( ) mark in space provided.

1. Age in years ( )
   a) 40 - 43yrs
   b) 44 - 47yrs
   c) 48 - 51yrs
   d) 52 - 55yrs

2. Marital status ( )
   a) Unmarried
   b) Married
   c) Widowed
   d) Divorced

3. Educational status: ( )
   a) Not literate
   b) Primary
   c) Middle school
   d) Higher secondary
   e) Graduate

4. Occupation ( )
   a) House wife
   b) Daily wage labor
   c) Retired

d) Business

5. Monthly Income ( )
   a) <3000
   b) 3001-5000
   c) 5001-8000
   d) >8000

6. Type of family ( )
   a) Nuclear family
   b) Joint family

7. What is the duration of hot flushes ( )
   a) 2 to 5 mts
   b) 5 to 10 mts
   c) 10 to 15 mts
   d) 15 to 30 mts

8. How often do you experience hot flushes? ( )
   a) Once a day
   b) Once in a week
   c) Twice in a week
   d) Once in a month

Very frequent-more than 2 times in a week, Frequent - once in a week, Rare - once in a month.

Score:

Very frequent =3, frequent =2, rare=1.

PART:II

HOT FLUSHES ASSESSMENT SCALE

INSTRUCTIONS:

Five point likert's scale to assess the hot flushes. Options are respectively, never, rarely, sometimes, mostly and always. You are requested to mention your answer in terms of the above mentioned words in appropriate columns.

S.no	Items	Never	Rarely	Some times	Mostly	Always
1	When I have hot flushes feeling of hot and flushing on my face, neck, arms sometimes full body.	0	1	2	3	4
2	When I have hot flush, a visual appearance of redness in the face and neck.	0	1	2	3	4
3	When I have hot flushes, I experience chill.	0	1	2	3	4
4	When I have hot flush, I feel thirsty.	0	1	2	3	4
5	When I have hot flushes, I feel palpitation.	0	1	2	3	4
6	When I have hot flushes, difficulty in falling sleep.	0	1	2	3	4
7	I have fearful dreams followed by hot flushes.	4	3	2	1	0
8	I feel fatigue, followed by hot flushes.	0	1	2	3	4
9	I feel headache, while I have hot flushes.	0	1	2	3	4
10	After eating the spicy foods, I feel hot flushes.	4	3	2	1	0

11	When I have hot flushes, I feel nausea.	0	1	2	3	4
12	Followed by hot flushes, I feel restlessness.	0	1	2	3	4
13	Followed by hot flushes, I feel depressed.	4	3	2	1	0
14	Followed by hot flushes, difficulty in concentration.	4	3	2	1	0
15	Followed by a hot flush, unable to enthusiastic about anything.	4	3	2	1	0
16	Hot flushes affect my personal life.	4	3	2	1	0
17	When I have hot flushes, it is best to avoid social situation.	4	3	2	1	0
18	I worry about when I am going to have another hot flush.	4	3	2	1	0
19	Followed by night sweats, it is difficult to cope the next day.	4	3	2	1	0
20	Hot flushes and night sweats don't affect my general health.	0	1	2	3	4
21	Followed by hot flushes, difficult to do household activity.	4	3	2	1	0
22	When I have hot flushes, I get angry with others.	0	1	2	3	4
23	When I have hot flushes, I feel irritated.	0	1	2	3	4
24	I have hot flushes, after taking tea coffee.	4	3	2	1	0
25	Uneasy feeling just before the hot flash.	0	1	2	3	4

APPENDIX-VI

tiuKiwg;gLj;jg;gl;lNeh;fhzYf;fhdgbtk;

Fwpg;G: fPNo nfhLf;fg;gl;Ls;s Nfs;tpfis xd;wd;gpd; xd;whf thrpj;J rhpahd gjpYf;F nfhLf;fg;gl;Ls;s fl;lj;jpy; ( ) nra;aTk;.

1.taJ:-

m) 40-44 ( )

M) 45-46

,) 50-54

<) 55-59

2.jpUkzj;jFjp:

m) jpUkzkhfhjth; ( )

M) jpUkzkhdtH

,) tpjitahdth;

<) tpthfuj;jhdtH

3.fy;tpj;jFjp:

m)gbf;fhjtH ( )

M)Muk;gepiy

<)Nky;epiy

c)gl;ljhhp

4.njhopy;:

m)tPl;Lj;jiytp ( )

M)jpdf;$ypf;FNtiynra;gtH

,)njhopw;gbg;G

<) xa;Tngw;wtH

c)tpahghuk;

5.khjtUkhdk;: ( )

m)3000 &gha;f;FfPo;

M)3001 Kjy;-5000 &gha; tiu

,)5001 Kjy;-8000 &gha; tiu

<)8000 &gha;f;FNky;

6.FLk;gepiy:

m)jdpf;FLk;gk; ( )

M)$l;Lf;FLk;gk;

7.vt;tsTNeuk; cs; ntg;gk; ePbf;Fk;?

m) 1Kjy 5 epkplq;fs; ( )

M) 5 Kjy 10 epkplq;fs;

,) 10 Kjy 15 epkplq;fs;

<) 15 Kjy 30 epkplq;fs;

8.;vj;jidKiwcs; ntg;gj;ijczHe;fpUf;fwPHfs;?

m)xUehisf;FxUKiw ( )

M)xUthuj;jpw;FxUKiw

,)xUthuj;jpw;F ,uz;L Ki

<)xUkhjj;jpw;F ,uz;LKiw

gphpT-M

cs;ntg;gj;ijgw;wpakhjtplha; Row;rpKbtile;jngz;fspd; kdg;ghq;F

Fwpg;G:

FPNo nfhLf;fg;gl;Ls;s xt;nthU Nfs;tpfSf;Fk; vg;NghJk; ,y;iy vg;NghjhtJ rpyNeuq;fspy; gyNeuq;fspy; vg;NghJk; Nghd;w [e;Jtifahf tpilfis nfhLj;Js;Nsd;. ,tw;wpy; jq;fsJ jdpg;gl;l czHTfs; vt;thW cs;Sj vd;gij Fwpg;gLkhW jho;ikAld; Nfl;Lf;nfhs;fpNwd;.

t.vz;	jpl;lghpkhzk;	vg;NghJk; ,y;iy	vg;NghjhtJ	rpyNeuq;fspy;	gyNeuq;fspy;	vg;NghJk;
1	;cs;ntg;gk; tUk; NghJKfk; fOj;J if kw;Wk; rpyNeuk; cly; KOtJk; ntg;gkhfczh;jy;	0	1	2	3	4
2	cs;ntg;gk; tUk; NghJ Kfj;jpYk; fOj;jpYk; rptg;ghf ,Ug;gij fhz;fpNwd;;	0	1	2	3	4
3	cs;ntg;gk; te;jgpwF cly; Fsph;r;rpahf tUtij czHfpNwd;;	0	1	2	3	4
4	cs;ntg;gk; tUk; NghJjhfkhfczHfpNwd;	0	1	2	3	4
5	cs;ntg;gk; tUk; NghJ ,jaJbg;ig vd;dhy;	0	1	2	3	4

	czuKbfpwJ.					
6	cs;ntg;gk; tUk; NghJ vdf;F Jhq;Ftjpy; gpur;rid Vw;gLfpwJ.	0	1	2	3	4
7	cs;ntg;gk; tUk; NghJ vdf;F gaKWj;Jfpw fdT Vw;gLfpwJ.	4	3	2	1	0

8	cs;ntg;gk; tUk; NghJ fisg;gile;jijg; Nghy; czHfpNwd;	0	1	2	3	4
9	cs;ntg;gk; tUk; NghJjiytypia czHfpNwd;	0	1	2	3	4
10	Mjpf fhuk; rhg;gpl;lgpwF cs;ntg;gj;ij czHfpNwd;	4	3	2	1	0
11	cs;ntg;gk; tUk; NghJ FKl;LfpwJ.	0	1	2	3	4
12	cs;ntg;gk; te;j gpwF gugug;ghf ,Uf;fpwJ.	0	1	2	3	4
13	cs;ntg;gk; te;j gpwFkdNrhHtha; ,Uf;fpwJ.;	4	3	2	1	0
14	cs;ntg;gk; te;j gpwF ftdf;FiwT Vw;gLfpwJ.	4	3	2	1	0
15	cs;ntg;gj;ij njhlHe;J vjpYk; Mh;tk; ,y;iy.	4	3	2	1	0
16	cs;ntg;gj;jpdhy; FLk;g tho;f;if ghjpf;fg;gLfpwJ.	4	3	2	1	0

17	cs;ntg;gj;ij czUk; NghJ nghJ ,lq;fspy; fye;J nfhs;tij jtpu;f;fpNwd;	4	3	2	1	0
18	cs;ntg;gk; vg;NghJ jpUk;g tUnkd;W epidj;J ftiyg;gLfpNwd;	4	3	2	1	0
19	cs;ntg;gj;jpd; NghJ mjpfkhf tpaHit Vw;gLtjhy; kWehis vjpHnfhs;tJ rpukkhf ,Uf;fpwJ	4	3	2	1	0
20	cs;ntg;gKk; mjpf tpaHitAk; vd; cly;epiyia ghjpf;ftpy;iy.	0	1	2	3	4
21	cs;ntg;gk; te;j gpwF tPl;L Ntiyia nra;a f];lkhf ,Uf;fpwJ.	4	3	2	1	0
22	cs;ntg;gk; tUk; NghJ kw;wtHfsplk; mjpfkhf NfhggLfpNwd;.	0	1	2	3	4
23	cs;ntg;gk; tUk; tUk; Kd;G vhpr;ryilfpNwd;.	0	1	2	3	4
24	B my;yJ fhgp #lhf Fbj;j gpwF cs;ntg;gj;ij czHfpNwd;	4	3	2	1	0
25	cs;ntg;gk; tUk; Kd;G f];lkhf czHfpNwd;	0	1	2	3	4